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ON THE

HISTORICAL ANTIQUITY

OF THE

PEOPLE OF EGYPT.

JOHANNES VON GUMPACH.

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ON

THE HISTORICAL ANTIQUITY

OF

THE PEOPLE OF EGYPT,

THEIR VULGAR KALENDAR,

AND

THE EPOCH OF ITS INTRODUCTION.

BY

JOHANNES VON GUMPACH.

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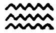
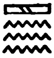
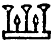
PREFACE.

In submitting the following Essay to the critical judgment of the learned, I have no occasion to enter at any length into the various causes which, notwithstanding the gradual accumulation of historical materials, both monumental and traditional, have combined in throwing the chronology of Egypt into a state of unparalleled confusion. The fact admits of no denial, and has been placed in a striking light by Sir George C. Lewis, in the sixth chapter of his recently published, most valuable work on the Astronomy of the Ancients.

Among the general reasons, however, I may name our still very imperfect knowledge of the language of the monumental inscriptions; the fragmentary and disconnected form, in which the remains of the historical tradition of Egypt have come down to us; and the premature attempts to restore the Egyptian chronology in its details, on the part of men who, however distinguished in other branches of learning, were, from their unacquaintance with the very principles of astronomy and scientific chronology, unqualified for such a task.

The special causes include the erroneous interpretation of the Egyptian seasons of the year by Champollion, whose brilliant genius was misled by the hieroglyphic element  (taken for the determinative of *water*) in the tetrameny , to identify the latter with "the season of inundation"—really  "the season of the Nile;"—and the fundamental dates, resting on that interpretation, introduced into Egyptian chronology by the illustrious Biot.

In the first place, therefore, the chronologer, with a view to the final restoration of consecutive order in the history of Egypt, has to direct his attention to three primary objects, namely: to place the kalendarian system of the ancient Egyptians on a firm basis; to establish the earliest epoch of their accredited history on secure grounds; and to determine, within the limits of that history, the greatest practical number of chronological dates, connected either with computable astronomical phenomena, or with indubitable historical contemporaneities.

On the present occasion, I have confined myself almost exclusively to the two former objects, as, in regard to the latter, I have reason to anticipate that important additions to the scanty materials, thus far available to us, will ere long be placed at the service of science by two of the most eminent Egyptologists of our day, Samuel Birch, Esq., of the British Museum, and Dr. Henry Brugsch, of the University of Berlin.

In the mean time, it is hoped that the little Essay, now submitted to the public, will not only be welcomed by the chronologer and the student of ancient history, but prove acceptable also to that more numerous class of readers, who consider the interesting question of the historical antiquity of the people of Egypt in its philosophical and religious aspect, rather than in its technical bearing.

JOHANNES VON GUMPACH.

GUERNSEY,
March, 1863.

ON THE HISTORICAL ANTIQUITY OF THE PEOPLE OF EGYPT.

I.

ON THE EGYPTIAN KALENDAR.

WHILE Sir George C. Lewis "fears, that the future discoveries of the Egyptologists will be attended with results as worthless and as uncertain as those, which have hitherto attended their ill-requited and barren labours,"* and Mr. Birch anticipates that, "although far from perfectly understood, ere long it will be as easy to read a page of hieroglyphs as of Greek or Latin:"† I neither share in the fears of the former, nor in the somewhat sanguine expectations of the latter, of these two equally distinguished savants. It is, certainly, undeniable that Champollion's system of interpretation continues to be beset with formidable difficulties, and that the poor and dubious results, to which it has thus far led, are well calculated to cast a certain amount of doubt upon it;‡ but that those difficulties should not be overcome, and that, sooner or later, a language, for the acquirement of which means so extensive are at our command, should not be mastered, it would be unreasonable to assume.

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* "A Historical Survey of the Astronomy of the Ancients," London, 1862, 8vo, p. 396.

† "An Introduction to the Study of the Egyptian Hieroglyphs," London, 1857, 12mo, p. 282.

‡ Professor Lepsius ("Ueber eine Hieroglyphische Inschrift am Tempel von Edfu," Berlin, 1855, p. 70) admits that, "indeed, not even the inscription of the Rosetta stone has thus far been made the subject of a philological explanation. A bare translation, adapted to the Greek text, is all that has been offered. The attempt of Salvolini to analyse the hieroglyphic text, went to the third line only; that of De Saulcy's of the demotic text, not beyond the fifth line: both attempts were unsuccessful: and none have been undertaken since."—So long as the hieroglyphic and demotic texts of a trilingual inscription, one of the languages of which is perfectly understood, defy all attempts at grammatical analysis, to main-

Under present circumstances, however, the determination of a few hieroglyphic or demotic groups, admitting of positive proof, is still a greater gain to our knowledge, than the translation of an entire inscription, yielding words without any logical sense, and taxing our credulity rather than satisfying our understanding. Thus, a few years ago, Dr. Brugsch established linguistically, from four astrological tablets brought to Europe by the Rev. Henry Stobart, the demotic names of the twelve signs of the zodiac and the five planets, as compared with ours; leaving it to astronomical computation to verify his philological conclusions.* This was done; and the latter were fully borne out by the results of Mr. Ellis's calculations,† showing that,

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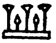
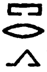
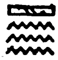
tain, as the disciples of Champollion do, that the true key to the ancient language of Egypt has been *unquestionably* found, appears to me a very questionable assertion.

* "Nouvelles Recherches sur la Division de l'Année des Anciens Egyptiens, suivies d'un Mémoire sur des Observations Planétaires, consignées dans quatre Tablettes Egyptiennes en Ecriture Démotique," Berlin, 1856, 8vo.

† "Results derived from an Examination of certain places of the five principal Planets, as interpreted from Inscriptions on four old Tablets, discovered in Egypt, made principally for determination of the Epoch of the Tablets," in the "Memoirs of the Royal Astronomical Society," vol. xxv. London, 1857, 4to, pp. 99 sqq. —I may here be allowed to remark, that Dr. Brugsch submitted his yet unpublished translation of the tablets, not only to Mr. Airy, but also to the late M. Biot and myself. In the first instance, he communicated to me only a portion of the planetary places, which I at once pronounced to rest on an astronomical basis, but to have been compiled for astrological purposes only. Hereupon Dr. Brugsch sent me the complete set of what he had assumed to be actual astronomical observations. For the purpose of examining their accuracy, I proceeded in a somewhat different way from Mr. Ellis. After determining, by a general method, the epoch of the first tablet—assuming, as a matter of course, the Egyptian dates to denote the entry of the planets into the corresponding signs—I constructed, on principles of my own, abbreviated tables for each planet, and by their means

in interpreting the corresponding hieroglyphic groups for the planets, Professor Lepsius had mistaken Jupiter for Saturn, Venus for Jupiter, Mercury for Mars, and Saturn for Mercury.*

At the same time, Dr. Brugsch proved, on linguistic grounds, that the true translation of the three Egyptian seasons of the year or *tetramenies*, as they are usually termed, and written in hieroglyphs ,  and , which Champollion rendered in this succession the season of *vegetation*, of *harvest*, and of *inundation*, is, in the same succession, the season of *inundation*, of *winter*, and of *summer*, respectively. And this being a question of considerable chronological and, hence, of astronomical as well as of philological interest, and admitting, moreover, of a positive solution, it is well worth examination.

Into linguistic discussions I cannot here enter. That the "legs walking," which occur in the group of hieroglyphs representing the second tetrameny, are a determinative, as Dr. Brugsch assumes with Champollion, there is reason to doubt. On the contrary, I look upon them as a phonetic, the value of which is not H, as Champollion, or I, as Dr. Hincks suppose; but T, as suggested by Mr. Birch.† Thus, in an

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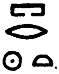
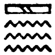
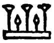
calculated the epochs of its geocentric entry into each following sign, according to the fixed Egyptian kalendar. I was thus enabled to enter into a critical discussion of the tablets; to point out its errors either of calculation or of transcription; to show, besides one or two minor breaks, the whole anomalous and disconnected character of Tablet III., remarked upon also by Mr. Ellis; and to verify both the conclusions of Dr. Brugsch and the judgment I had, on the outset, formed of the tablets. I transmitted to Dr. Brugsch the results of my investigation, on the eve of my departure from Heidelberg, where I was then residing, in November, 1855; but the packet, from some cause or other, appears to have miscarried, and my labour was thus lost.

* Comp. also, "Note sur les Noms Egyptiens des Planètes," par M. le Vicomte *Emm. de Rougé*, Paris, 1856, 8vo.

† *Bunsen*, "Egypt's Place in Universal History," London, 1848, 8vo, vol. i. p. 582.

inscription, quoted by Dr. Brugsch,[*] the season *winter* is written  where the "solar disk" is the determinative (of a division of the year), and the "legs walking" are, as in numerous other instances, replaced by their synonyme, the "segment of a circle" = T;[†] and of which Dr. Brugsch himself observes: "Je ferai remarquer que, dans notre texte comme bien souvent, le mot PeR est muni d'un ⌓ T, caractéristique du féminin, ce qui confirme de nouveau la parenté de ce mot avec ϯ-ⲯⲣⲱ, ⲧⲉ-ⲡⲣⲱ, *winter*, en copte." However this be, Dr. Brugsch has, on linguistic grounds, sufficiently established the true meaning of to be *winter*, and that of  to be *summer*. Hence, he rightly concludes, that the third, in order the first, tetrameny, "qui est représentée par  (des arbres et des plantes, qui sortent de l'eau de l'inondation, peinte en bleu dans les inscriptions coloriées) et par laquelle l'année Egyptienne commence, n'est pas la tétraménie de la végétation, mais bien celle de l'inondation, comprenant les quatre premiers mois de l'année."[‡] But, simply interpreting the hieroglyph in question by *fluctuatio*, he leaves this part of his investigation in an unsatisfactory state.[§] I will endeavour to supply the deficient argument.

What, with me, has altogether weighed in favor of Dr.

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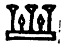
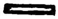
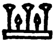
[*] "Nouvelles Recherches," p. 9 and plate 1, No. 14; "Denkmäler der Preuss. Expedition," Alth. iii. pl. 73.

[†] *Bunsen*, "Egypt's Place in Universal History," vol. i. p. 568.

[‡] "Nouvelles Recherches," p. 13.

[§] "Fluctuatio," moreover, is a term hardly applicable to the rising of the Nile, which, according to Horapollo, was by the ancient Egyptians termed *νοῦν* (*Horapollinis Niloi* "Hieroglyphica," ed. Leemans, Amstel. 1835, 8vo, pp. 28, 222 sqq.)

Brugsch's conclusions even more than his philological proofs, is on the one hand that, as will be presently shown, Champollion's translation is contradicted by the entire testimony of history, and necessitates, on the part of his followers, a purely imaginary reform of the Egyptian kalendar about the year B.C. 2785; on the other hand the circumstance, overlooked by Dr. Brugsch, that tradition has handed down to us the Egyptian seasons by the same names, and in the same succession, as established by him, and that those names are, to this day, in vulgar use among the Arab inhabitants of the land. The latter fact appears to me almost decisive of itself.

The modern Arabs of Egypt, namely, term their three seasons: النيل, the *Nile*, الشتاء, the *winter*, and الصيف the *summer* season;* and in these designations, characteristic, not of Arab notions but of the lands of the Nile and therefore manifestly traditional, at once confirm in the strongest manner the linguistic deductions of Dr. Brugsch, and suggest to us the true interpretation of the hieroglyph for the first tetrameny, as an *ideographic* sign, used to denote *the Nile*, or more literally, *the water (river) of Upper and Lower Egypt.* For, that  is here an ideograph is evident from its very character as a monogram; and that its meaning is just what I have stated, becomes equally so, from the moment we recognise in the *otherwise unknown* "trees and plants rising out of the inundating waters," the well-known "lotus" and "lotus buds," representing on "the layer of earth," *Upper and Lower Egypt*, and on "the pool," *the water of both countries*, i.e. the Nile. And this, too, accounts for the circumstance that the Nile was known to the ancients also by the name of *Ægyptus.* Nearchus, Strabo informs us,[*] "thought that the Nile had justly the synonyme of the land, Egypt;" and Homer speaks of it repeatedly as the river Αἴγυπτος.[†] No doubt, the origin of this appellation was the hieroglyph  being taken in the sense of "land," and in consequence of which the ideograph  was translated (the river) "Egypt" instead of "*the river of* Egypt." Under any circumstances, I venture to think that the historical and traditional testimony, adduced in support of the interpretation here offered, gives to it an almost irresistible force; and leaves me only to furnish the *positive* proof, that all the three seasons of the Egyptian year, as expressed in hieroglyphs, have been correctly rendered by Dr. Brugsch. This I will now proceed to do.

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* Comp. *Poole*'s "Horæ Ægyptiacæ," London, 1851, 8vo, p. 3.

When, about thirty years ago, Champollion had deciphered the Egyptian months and intercalary days, he communicated his results to Biot, who at once perceived the importance of the discovery, in connection with the kalendarian system of the Egyptians, for the purposes of historical research. They presented, each from their own standing point, a memoir upon the subject to the French Academy. That of Champollion disappeared; and what now remains of his laborious essay has, collected by Biot and Champollion-Figeac, been embodied by the former in his "*Recherches sur l'année vague des Egyptiens;*"[‡] by the latter in a separate work under his deceased brother's name.[§]

The interpretation, given by Champollion of the months, is as follows:[‖]

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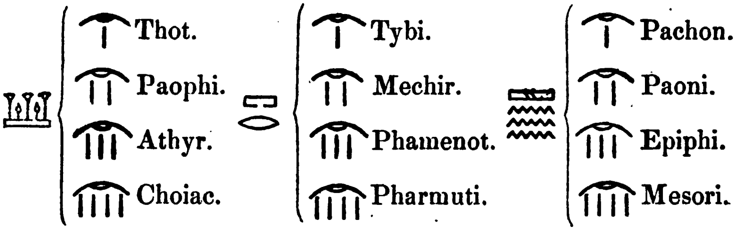
[*] "Geogr." xv. 16; Casaub. p. 691.

[†] Odyss. III. 300; IV. 477, 581, &c.

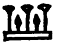
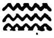
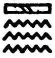
[‡] Paris, 1831, 4to, note, pp. 43, 44.

[§] "Mémoire sur les signes, employés par les anciens Egyptiens à la notation des divisions du temps," Paris, 1841, 8vo.

[‖] *Biot*, "Recherches sur l'année vague," p. 43.



(The five intercalary days.)

Now, as it was well known that the vague year of the Egyptians commenced with the month Thot, and as Biot rightly inferred that, at the period of the introduction of the kalendarian system in question, the kalendar must be supposed to have concurred with the natural phenomena, on which it was discovered or concluded to rest, namely, on the heliacal rising of Sirius for Egypt on the 1 Thot and the rising of the Nile, which has always taken place about the time of the summer-solstice,* simultaneously with "the season of inundation," it would have been but natural to assume, *à priori*, that the hieroglyph  represented "the season of inundation" or *the season of the Nile*, as we actually have found it to do. Champollion, however, taking the element  in the third tetrameny, to be the determinative of water, connected "the season of inundation" with the hieroglyphic group  and consequently assumed, contrary to the testimony of history, the month Pachon to have commenced the vague year in the early Egyptian kalendar.†

Champollion's interpretation was universally accepted,—Professor Lepsius considers it to be so well established "as to require no further illustration, being self-evident;"*—and since Biot necessarily adopted with it the consequent assumption of the 1st of Pachon being the epoch of the Egyptian year, and made it the basis of his calculations,† much fundamental confusion has thus been introduced into Egyptian chronology.

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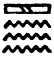
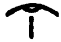
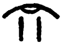
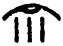
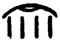
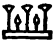
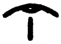
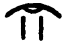
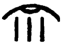
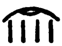
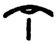
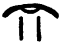
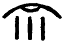
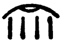
* What Mr. Poole ("Horæ Ægyptiacæ," pp. 4, 5) states, in reference to "the season of the waters," is devoid of all historical and physical foundation.

† *Biot*, "Recherches sur l'année vague," pp. 55, 56; *Lepsius*, "Die Chronologie der Ægypter," Berlin, 1849, 4to, pp. 211, 213; *Champollion*, "Mémoire sur les signes employés par les anciens Egyptiens," p. 63.

The kalendar of Champollion for the normal Egyptian year, adopting for the heliacal rising of Sirius the date of the Julian 20th of July,‡ would consequently be this:

 Season of inundation		1 Pachon	= 20 July, of the Julian year A, assumed to be a common year.
		1 Paoni	= 19 August.
		1 Epiphi	= 18 September.
		1 Mesori	= 18 October.
 Season of vegetation		1 Thot	= 17 November.
		1 Paophi	= 17 December.
		1 Athyr	= 16 January, of the Julian year B, assumed to be a leap-year.
		1 Choiac	= 15 February.
 Season of harvest		1 Tybi	= 16 March.
		1 Mechir	= 15 April.
		1 Phamenot	= 15 May.
		Pharmuti	= 14 June.
		first intercalary day	= 14 July.
		fifth „ „	= 18 „

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* "Die Chron. der Ægyp." p. 148. † "Recherches sur l'année vague," pp. 72, 73.

‡ During the entire period of early Egyptian history, Sirius rose heliacally on the 20th July, in the Julian kalendar, for Heliopolis.

In accordance with this kalendar, and taking the summer-solstice for a basis, Biot calculated that the former must have been introduced at one of the following epochs:*

Year before Christ.	Julian date of 1 Thot.	Date of the Summer-solstice.
4791	4 December.	1 August.
3286	22 November.	20 July.
1781	11 November.	9 July.
276	31 October.	27 June.

At the same time he considered it probable, that the five intercalary days were not added till the year B.C. 1781, and that previously to that epoch the Egyptian year consisted of 360 days only;† forgetting that; if such had been the case, the cycle of the return of the vague 1 Thot to its normal position in the kalendar would have comprised a period of not quite 70 years; and that, consequently, the epoch of the first normal year, or of the introduction of the primitive kalendar, might be placed in any year preceding the year B.C. 1781 by a number of years being a multiple of approximatively 70 years. Nor is there any tenable ground, either to assume that the vague year of the Egyptians ever consisted of 360 days, or to connect the epoch of their normal year with the exact date of the summer-solstice.

Nevertheless, Professor Lepsius "does not feel the slightest hesitation in assigning to the perfect consolidation of the Egyptian kalendar the early period of the year [—3285 or B.C. 3286, which he mistakes for the year B.C. 3285, and from chronological ignorance "corrects" into that of] B.C. 3282."‡ There is but one inconvenience attached to this. Numerous historical and astronomical dates, connecting the vulgar Egyptian with other known kalendars, as well as the direct testimony of history, prove that, up to and beyond the year B.C. 1325, not the 1 Pachon but the 1 Thot constituted the actual epoch of the Egyptian year.* Hence, the Berlin Professor finds himself under the necessity of carrying out, on his own sole authority and as early as in the year B.C. 2782, a "Reform of the Solar Kalendar." In virtue of which reform, he tells us, "they commenced, after the first 500 years, the periods anew, and simultaneously the year itself with the 1 Thot, necessitating likewise the displacement of the five intercalary days. The Sothic period of 1,461 years was thus destroyed, and, after the reform, had to be counted again from the beginning. Consequently its next epoch fell in the year B.C. 1322, instead of the year B.C. 1782, as it would have done in the primitive kalendar"† of Champollion.

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* "Recherches sur l'année vague," p. 57.

† "Recherches sur l'année vague," p. 111.

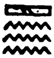
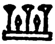
‡ "Die Chronologie der Ægypter," pp. 212, 213.—"Die Jahre nun, in welchen

die Sommerwende auf den ersten Pachon fiel und der bewegliche Kalender folglich mit dem natürlichen sich vollkommen deckte, lassen sich astronomisch berechnen und sind von Biot auf 275, 1780 und 3285 vor Chr. [this is incorrect, see preceding page] bestimmt worden. Sie gehen unmittelbar und mit vollkommenster Sicherheit aus dem Verhältniss des Wandeljahres zum Julianischen hervor. Biot widmet einen grossen Theil seiner Schrift der scharfsinnigen Auseinandersetzung, warum das Jahr 3285 sich vorzugsweise als dasjenige empfiehlt, auf welches der Ursprung des Ægyptischen Kalenders zurückgeht. . . . Für uns kann es jetzt nicht das mindeste Bedenken haben die vollständige Einrichtung des Ægyptischen Kalenders, so wie die unmittelbar daraus hervorgehende Kenntniss des festen Siriusjahres und seiner Perioden von 4 und von 1460 Jahren, in jene früheste Epoche des Jahres 3282 (3285) vor Chr. zurückzulegen, in welchem nicht nur die Sommersonnenwende, und folglich der Anfang der Nilschwelle auf den ersten Tag des ersten Wassermonats d.i. auf den ersten Pachon fiel, sondern auch der heliakische Aufgang der Sothis."

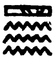
* Comp. *Ideler*, "Handbuch der Mathem. und Technischen Chronologie," Berlin, 1825, 8vo, vol. i. pp. 93 sqq.

† "Die Chronologie der Ægypter," p. 216.

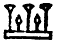
The reformed kalendar of Professor Lepsius is thus seen, for the normal Egyptian year, to be arranged as follows:

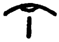
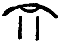
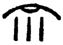
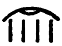
 Season of inundation	1 Thot	= 20 July, of the Julian year A, assumed to be a common year.
	1 Paophi	= 19 August.
	1 Athyr	= 18 September.
	1 Choiac	= 18 October.
 Season of vegetation	1 Tybi	= 17 November.
	1 Mechir	= 17 December.
	1 Phamenot	= 16 January, of the Julian year B, assumed to be a leap-year.
	1 Pharmuti	= 15 February.
 Season of harvest	1 Pachon	= 16 March.
	1 Paoni	= 15 April.
	1 Epiphi	= 15 May.
	1 Mesori.	= 14 June.

first intercalary day = 14 July.
fifth „ „ = 18 „

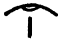
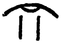
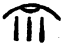
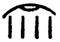
That such is really the kalendarian system of the Egyptians, according to Professor Lepsius, necessarily results not only from the passage I have quoted above, but equally so from the circumstance that he rightly insists on the commencement of the normal Egyptian year having been determined by the heliacal rising of Sirius on the Julian 20 July and the 1 Thot, and on its epoch having corresponded to the epoch of the "season of inundation," which he continues to identify with the hieroglyphic group , holding, as I have already remarked, the truth of Champollion's interpretation of the Egyptian tetramenies to be a matter of positive certainty. My reason for pointing this out so particularly, will presently appear.

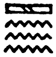
On the other hand, the translation of those tetramenies by Dr. Brugsch and myself, leads to the following kalendarian arrangement for the normal Egyptian year:*

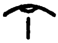
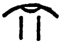
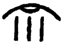
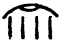

Season of the Nile.

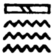
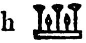
 1 Thot = 20 July, of the Julian year A, assumed to be a common year.
 1 Paophi = 19 August.
 1 Athyr = 18 September.
 1 Choiac = 18 October.

Season of winter.

 1 Tybi = 17 November.
 1 Mechir = 17 December.
 1 Phamenot = 16 January, of the Julian year B, assumed to be a leap-year.
 1 Pharmuti = 15 February.


Season of summer.

 1 Pachon = 16 March.
 1 Paoni = 15 April.
 1 Epiphi = 15 May.
 1 Mesori = 14 June.
first intercalary day = 14 July.
fifth " " = 18 "

For the sake of more convenient comparison, I will, on pp. 14-15, place these kalendars side by side, adding the corresponding Julian dates for the normal Egyptian year; so that we have no less than three kalendars before us, each of which professes to represent the true kalendarian system of the ancient Egyptians, with this peculiarity, as regards Professor Lepsius, that he acknowledges Champollion's kalendar for the period B.C. 3282—B.C. 2782, and then substitutes for it his own for the whole succeeding period from the year B.C. 2782 downwards. Our kalendars are seen to differ and to agree in the following points, namely: Champollion places the intercalary days at the end of Pharmuti, Professor Lepsius and Dr. Brugsch at the end of Mesori, all placing them at the close of the vague Egyptian year; Champollion commences the year with the first Pachon, Professor Lepsius and Dr. Brugsch with the 1 Thot; and while Champollion and Professor Lepsius take the hieroglyphic group  to represent the "season of inundation," being the first tetrameny of the Egyptian year, Dr. Brugsch and myself take the latter to be represented by the ideograph ; the other tetramenies being, on either side, interpreted in a similarly differing manner. The principal point, upon which all agree is, that *the fixed epoch of the normal Egyptian year fell on the* 20 *July in the Julian kalendar.*

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* Comp. *Brugsch*, "Nouvelles Recherches," pp. 14, 15. It is only from his unacquaintance with chronology, that Dr. Brugsch places all the "corresponding months" by one month too early, "June—July" for "July—August," &c.

Hence, being in the possession of numerous comparative dates, Egyptian and others, the position of which latter in the Julian kalendar is known, the question as to which of our various kalendars is the true one, becomes a matter of easy and positive solution. Before, however, I proceed to offer this solution, I have to point out a somewhat remarkable and, I wish I could say on the field of chronology singular, circumstance. It is this, that the Champollionists, who place the first Pachon at the head of the normal Egyptian year, reduce it to the Julian kalendar as the 1 Thot; and the Lepsiusists, who

Champollion.		**Lepsius.**	
Season of inundation	1 Pachon	Season of inundation	1 Thot
	1 Paoni		1 Paophi
	1 Epiphi		1 Athyr
	1 Mesori		1 Choiac
Season of vegetation	1 Thot	Season of vegetation	1 Tybi
	1 Paophi		1 Mechir
	1 Athyr		1 Phamenot
	1 Choiac		1 Pharmuti
Season of harvest	1 Tybi	Season of harvest	1 Pachon
	1 Mechir		1 Paoni
	1 Phamenot		1 Epiphi
	1 Pharmuti		1 Mesori

first intercalary day . . . .
fifth „ „ . . . .

place the 1 Thot at the head of the normal Egyptian year, translate it as the 1 Pachon. *Nor is Professor Lepsius himself an exception to the rule.* His great reform of the Egyptian kalendar, in the year B.C. 2782, once set up in type, he thereupon ignores it as completely, as he might be expected to have done some idle dream.*

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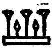
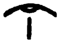
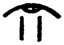
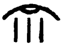
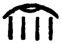
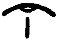
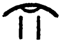
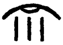
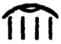
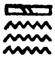
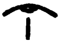
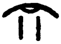
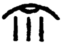
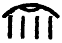
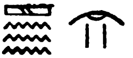
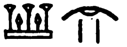
* Professor Lepsius occasionally forgets, at the top of a page, the contents of a note at the foot of the preceding one, while all along commenting upon it. Thus,

Brugsch.			Corresponding Julian date, common to all.
 Season of the Nile.		1 Thot	20 July, year A.
		1 Paophi	19 August.
		1 Athyr	18 September.
		1 Choiac	18 October.
Season of winter.		1 Tybi	17 November.
		1 Mechir	17 December.
		1 Phamenot	16 January, B.
		1 Pharmuti	15 February.
 Season of summer.		1 Pachon	16 March.
		1 Paoni	15 April.
		1 Epiphi	15 May.
		1 Mesori	14 June.
. . . .			14 July.
. . . .			18 ,,

A few examples will be necessary to prove and illustrate,

at the foot of page 226 of his "Chronologie der Ægypter," he quotes the following passage from *Athen.* Deipnos. XIV. p. 639, ed. Casaub.: "Βήρωσσος δ' ἐν πρώτῳ Βαβυλωνικῶν, τῷ Λῴῳ φησὶ μηνὶ ἑκκαιδεκάτῃ ἄγεσθαι ἑορτὴν Σακέαν προσαγορευομένην ἐν Βαβυλῶνι ἐπὶ ἡμέρας πέντε; and at the top of page 227, he remarks upon it as follows: "The festival *Sakea* is by Berosus placed on the 19th *(the nineteenth)* day of Lous; it lasted five days, and if, in accordance with the nature of the feast, the last was the chief day, *it commenced, perhaps, not on the* 19*th but on the* 15*th day of the month, consequently on the day of full-moon.*"

what might otherwise be denied by certain Lepsiusists, and more especially so by the Berlin Professor himself, who is a somewhat greater adept in the science of misrepresentation,[*] than he is in the science of chronology.[†] That history bears no trace of any dates of the period B.C. 3282—B.C. 2782, and that the views of Professor Lepsius as to the primitive form of the solar kalendar of the Egyptians, in accordance with Champollion's translation of the tetramenies, are purely imaginary, I need hardly state. The dates, I shall adduce, may be considered to refer to the normal Egyptian year, in as much as, whatever year they really belong to, the comparative results will be found precisely similar.

Rosellini[‡] and Bunsen[§] render the first day of  and the sixth day of  the 1 *Paoni* and the 6 *Paophi*, respectively. According to the kalendar of Professor Lepsius, they should have been rendered, as a glance at our comparative table shows us, the 1 Paophi and the 6 Mechir, respectively. In Champollion's kalendar, the 1 Paoni corresponds to the 19 August; in Professor Lepsius' kalendar to the 15 April: in the former, the 6 Paophi to the 22 December, in the latter to the 24 August. In Professor Lepsius' kalendar the 1 Paophi corresponds to the 19 August, in Champollion's kalendar to the 17 December; in the former, the 6 Mechir to the 22 December, in the latter to the 20 April.

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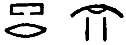
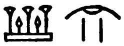
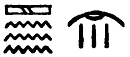
[*] *J. von Gumpach*, "Zwei Chronologische Abhandlungen," Heidelberg, 1854, 8vo, pp. 3, 11, 12, 13, 14, 16, 17, 19, 20, 22, 23, 28, 29, 32, 37, 40, 41, 42, 44, 45, 46, 51, 57, 58, 64, 65, 74, &c. See also Section II., some of the notes.

[†] Comp. the treatise just quoted. Professor Lepsius' *mauvaise foi* is exceeded only by his chronological and astronomical ignorance. Thus, from what he states in his "Chronology," p. 198, it would necessarily follow that his favorite people, the Egyptians, had observed the precession of the equinoxes for more than a million of years before our era. From another passage (p. 144 comp. p. 198) it must be inferred, that he has enriched the Berlin Museum with remains of Egyptian art from the Dog-Star and the Great Bear. Nay, p. 98 leaves us in doubt as to whether, once upon a time, Sirius, at the epoch of the winter-solstice, used to stray—except at Denderah dinner-time—in the far East, South, or West; or whether, about the period in question, it was not rather the Earth which, at noon, was in the habit of standing still for Denderah.

[‡] "I Monumenti dell' Egitto," Pisa, 1832-41; "Monumenti Storici," vol. ii. p. 132.

[§] "Ægypten's Stelle in der Weltgeschichte," Hamburg and Gotha, 1845-1857, vol. iii. p. 142.

M. Mariette* translates the first day of  the first *Athyr*, by mistake for the 1 *Mechir*, because in the next following page he renders the first day of  the first *Paophi*. According to the kalendar of Professor Lepsius, the former date should have been translated the 1 *Paoni*. In this kalendar the 1 Mechir answers to the 17 December, in that of Champollion to the 15 April; in the former the 1 Paoni to the 15 April, in the latter to the 19 August.

M. De Rougé† renders the 28th day of  the 28 *Epiphi;* being, as he interprets the text, the day on which Sirius then rose heliacally in the vague year; and so little conscious of the effect of Professor Lepsius' kalendarian reform is even this distinguished Egyptologist, that he remarks: "Personne n'a élevé d'objection contre la notation des douze mois de l'année Egyptienne, depuis le célèbre mémoire de Champollion." Yet a glance at the kalendar of Professor Lepsius shows that, according to him, the date in question should be translated the 28 *Athyr;* and that, while in his kalendar the 28 Epiphi corresponds to the 11 June, it corresponds in the kalendar of Champollion to the 15 September; and while in the latter the 28 Athyr answers to the 12 January, it answers in the former to the 15 September.

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* "Renseignements sur les soixante-quatre Apis trouvés dans les souterrains du Sérapéum," Extrait du Bulletin Archéologique de l'Athénæum Français, Paris, 1855, 4to, pp. 8, 10.

† "Mémoire sur quelques phénomènes célestes, rapportés sur les monuments Egyptiens, avec leur date de jour dans l'année vague," Paris, 1853, 8vo, p. 16.

I might multiply these examples at pleasure; as there would, however, be no further object in my so doing, I will add only one or two more of Professor Lepsius' own. M. De Rougé observes, in reference to the kalendarian fragment, alluded to above and supposed to belong to the reign of Thotmes III: "C'est peut-être ce fragment que M. Lepsius avait en vue, en disant qu'il avait trouvé la fête de Sothis mentionnée sous Thoutmès III. (voy. Einleitung, p. 176). Mais il ne parle pas de la date du jour de la fête, où réside toute l'importance de l'inscription, au point de vue chronologique."* It has escaped M. De Rougé's notice, that Professor Lepsius religiously avoids giving exact hieroglyphic dates in any of his published writings. The only one, known to me, occurs in that Memorial Inscription,† composed by himself,—in a language, wherein he confesses to be unable to decipher one single historical line,‡ although he has enriched its symbols with the Prussian eagle and the Christian cross,—which, erected at the entrance to the great pyramid of Gizeh as a monumental libel on German science, is casting ridicule, deserved by "Lepsius the scribe" alone, upon the Prussian expedition itself, as well as upon the memory of the excellent though weak monarch, by whose royal and not lightly taxed munificence it was so lavishly supported, in order that its results, published to the learned world in a splendid form, might be rendered *critically valueless* by Professor Lepsius' *corruptions of the text.** The date in question is thus

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* "Mémoire sur quelques phénomènes célestes," p. 15, note.

† *Lepsius*, "Briefe aus Ægypten, Æthiopien," &c., Berlin, 1852, 8vo, p. 30.

‡ "Die Chronologie der Ægypter," pp. 127, 128. In his Memoir, "Ueber eine Hieroglyphische Inschrift am Tempel von Edfu," Berlin, 1855, 4to, he observes (p. 71) generally: "As yet it is well nigh impossible to explain, with any degree of certainty, longer texts without leaving large and essential gaps. Nay, there are numerous inscriptions, of which we understand at present absolutely nothing, and the general purport of which we are hardly able to *guess*." Yet this is the same savant, who *composes* in the language of those inscriptions, and largely "emendates" the texts of the latter. Suppose an Englishman, just able to make out a word of *German* here and there, without any grammatical knowledge of the German language and without either a grammar or a dictionary at his command, undertaking to compose a German inscription for some public building in London, and to publish a critical edition of the works of Goethe; and we have the very prototype of Professor Lepsius in reference to his chief philological labours on the field of Egyptian literature.

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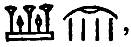
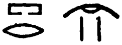
* For the sake of illustrating Professor Lepsius' critical proceedings, I may be permitted to quote a few passages from one of his most readily accessible memoirs, translated into English by Dr. Bell, on "The XXII. Egyptian Royal Dynasty," London, 1858, 4to.

"Some irregularities of the inscription," we read p. 7, "fall to the share of the writer. For instance the group.... 'son of' is four times wanting before the name of the mother....; once the sign.... of 'son' is wanting, where it on no account ought to be so; and once there stands.... 'royal son,' where.... 'son' solely ought to be.... The writer had, in transcribing the genealogy, clearly made the mistake of a line, for at his father, the sign.... for 'royal,' where it was to be expected, is wanting. Strange, finally, is it that by the sign.... 'royal mother,' is denoted the grandmother of the first king.... (p. 8.) Perhaps the writer ought to have put.... 'royal daughter,' instead of.... 'royal mother,' the goose instead of the vulture.... The text of the inscription may be assuredly corrected and given synoptically as follows.... (p. 9.) The sign .... in square brackets is to be rejected; the 6 groups in round brackets must be supplied; and then we gain the whole in the following form.... (p. 11.) There is therefore only the fifth king wanting.... The other monuments now step in,.... so that, as the one wanting finds only one place open—the fifth—that must be filled with this one. Thus the entire dynasty is produced with perfect surety.... (p. 34.) As the characters, which are here very legible, stand, they give no sense. Luckily, the error attributable here to the mason or the copyist, is avoided in the second place.... (p. 39.) Evidently, by a mistake of the writer or sculptor, the 22 days of the date in the following line are misplaced here.... (p. 38.) In the year lii., month i., read ii., i.e. Paophi.... In the original, both this shield and the two following ones have small added cognomens, which are not given here.... (p. 49.) It must be thus read, instead of.... as it stands in the original.... The original has.... instead of which possibly.... ought to be read.... Some other smaller errors are ascribable to the writer, which, as unimportant, I pass by. *Egyptian exactness in their* expressed: "In the year of salvation 1842, in the tenth month, on the fifteenth day on the forty-seventh birthday of His Majesty, on the top of the pyramid of King Cheops; in the third year, in the fifth month, on the ninth day of His Majesty's reign; in the year 3164 from the commencement of the Sothic period under King Menephthes."

Although erroneously reduced,* dates of similar exactness, taken from the Egyptian monuments and compared with the Julian kalendar, will be in vain looked for in the published works of Professor Lepsius. In three places of his "Chronology," however, I find that hieroglyphic months with their translation actually do occur. In the first note to page 53, he renders , "the month of *Choiac;*" and a glance at his kalendar, p. 14, shows us that, had not his own kalendarian reform, in the year B.C. 2782, completely slipped from his memory, he should have rendered that date, "the month of *Pharmuti.*" In page 109, Professor Lepsius translates , "the month of *Mechir;*" and again we find that,

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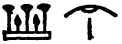
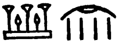
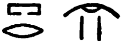
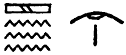
inscriptions is never very remarkable."—Were a modern Egyptian savant, who knew just enough of English to mistake *bad* for *bed*, or *whine* for *wine*, thus to comment upon, to criticise, and to *emendate* one of the best and most carefully printed texts of Shakspeare, what would be thought of him?

* I have on a previous occasion ("Zwei Chronol. Abhandlungen," Heidelberg, 1854,) placed it beyond every reasonable doubt, both on historical and astronomical grounds, that one of the true epochs of the Sothic Cycle is the 20 July, not of the year B.C. 1322, but of the year B.C. 1325 (comp. also p. 24), and that the conquest of Egypt by Cambyses fell in the year B.C. 527, instead of the year B.C. 525, as is usually supposed.

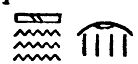
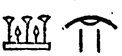
At the same time, I had occasion to show how utterly incapable Professor Lepsius is of correctly performing the least complicated calculation, connected with astronomy or even chronology. Nay, the simple reduction of a Mahometan date to the Julian kalendar is too much for his arithmetical powers ("Briefe aus Ægypten," p. 251; comp. my "Practical Tables for the Reduction of Mahometan Dates," &c., London, 1856, 4to).

according to himself he should have translated, "the month of *Paoni.*" And in page 115, he renders ,  and , the months of "*Thot,*" of "*Choiac,*" and of "*Mechir,*" respectively; whereas his own kalendar required, that he should have rendered those groups as the months of "*Tybi,*" of "*Pharmuti,*" and of "*Paoni,*" respectively. Hence, as the author of "Champollion's reformed kalendar" so completely ignores its existence himself, we may now consign it to oblivion, together with the purely imaginary foundation, on which it was imagined to rest.

For, the plain fact is this, that all Egyptologists, without one single exception, besides Dr. Brugsch, have invariably interpreted the Egyptian seasons and months according to Champollion's nomenclature, and should, consequently, have converted the days of the months into Julian dates according to Champollion's kalendar. But, instead of doing so, they, *in perfect unconsciousness of the fact,* reduce the hieroglyphic dates, derived from Champollion's nomenclature, by a method, placed ready to their hands by Ideler and Biot, and *based on the historically known position of the first of* THOT *at the head of the Egyptian year;* that is to say, in conformity with a kalendar, perfectly identical with that of Dr. Brugsch, so far as the months and the days of the months go. Professor Lepsius, struck by a vague perception of this circumstance, devised that abortive "Reform of the Egyptian Kalendar," previously alluded to, and which, on the strength of his chronological ignorance, he imagined would reconcile Champollion's nomenclature of the Egyptian seasons and months with the chronological requirements of history.

That the kalendar of Champollion is wholly inadmissible, being a positive and generally admitted fact, the only remaining question, then, is: whether Dr. Brugsch's nomenclature of the Egyptian *seasons* is true, as well as is his application of the Egyptian *months* to the Julian kalendar; or whether the former have been correctly interpreted by Champollion? In the latter case,  would no longer represent the month of *Pachon*, but that of *Thot;* in the former case, it would continue to represent the month of *Pachon*. And similarly as regards the other hieroglyphic months. That is to say, if Dr. Brugsch's rendering of the hieroglyphic *tetramenies* is correct, Champollion's rendering of the *months* is so: but if Champollion's translation of the Egyptian *seasons* be true, his designation of the *months* rests on an error.

It will be readily perceived, that the solution of this question depends on one of two elements, namely: the occurrence in some historical inscription of a complete hieroglyphic or demotic date in connection with a corresponding date, expressed in a known kalendar; or else the record of such a date, relating to some computable astronomical phenomenon.

Now, a date of the first kind we possess in the inscription of the Rosetta stone, according to the Greek text of which (line 6) the 4 *Xanthicus* of the ninth year of the reign of Ptolemy Epiphanes answered to the 18 *Mechir*. The corresponding hieroglyphic text is wanting; but this happens to be of no consequence here, in as much as three further months are named in the Greek text, with their corresponding Egyptian symbols preserved in the hieroglyphic text, namely: (the 30) *Mesori* = , (the 17) *Paophi** = , and the epoch

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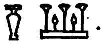
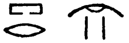
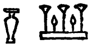
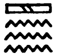
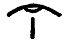
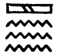
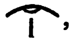
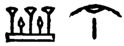
* The words τὴν τοῦ φαωφὶ are obliterated in the Greek text; but it follows by comparison from the perfectly preserved hieroglyphic group, that the month *Paophi* may be supplied with absolute certainty.

Thot = . Hence, assuming the Greek translator to have been consistent in his rendering of the Egyptian dates, as we are fully entitled to do, we find that, in conformity with his general nomenclature, (the 18) *Mechir* must have been expressed in the hieroglyphic text by the group .

To solve our question is now no longer difficult. On comparing the different groups with the kalendar of Professor Lepsius, a single glance shows us that this kalendar is wrong throughout, and that we had the best of reasons to dismiss it from any further consideration. A second glance tells us that Champollion's nomenclature of the *months*, as they appear both in his own and in Dr. Brugsch's kalendar, agrees perfectly with that of the Rosetta stone. A third glance, finally, leads us at once to infer from the group , *the epoch Thot*, that, because the expression equally applies to the *normal* Egyptian year, in which that epoch coincided with the mean epoch of the rising Nile, Champollion's interpretation of the *seasons* must be incorrect, and that the kalendar of Dr. Brugsch represents the true kalendar of the Egyptians.

And by computation we find this inference fully confirmed. The 4 Xanthicus of the ninth regnal year of Ptolemy Epiphanes, as I have elsewhere shown,* corresponds to the 27 March, B.C. 196. Hence, as this date answers to the 18 Mechir, we obtain for the preceding 1 Thot the Julian date of October 11, B.C. 197; for the preceding 17 Paophi the Julian 6 December, B.C. 197; and for the following 30 Mesori the Julian 5 October B.C. 196. The number of days intervening between the 11 October and the 20 July, reckoned backwards, is 282; which, multiplied by 4, give 1,128 as the number of years intervening between the year B.C. 197 and the preceding epoch of the Sothic period. The latter is thus found to be the year B.C. 1325. Calculating now from this epoch, and assuming it to correspond, firstly, with  , *the* 1 *Pachon*, in conformity with Champollion's kalendar; secondly, with  , *the* 1 *Thot*, in conformity with Professor Lepsius' kalendar; and thirdly, with , *the* 1 *Thot*, in conformity with Dr. Brugsch's kalendar, for the given Julian dates the corresponding Egyptian dates, the latter should answer to the given Egyptian dates; and in whichever kalendar they do so, that kalendar truly represents the Egyptian kalendar. The result is exhibited in the annexed table.

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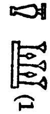
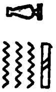
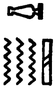
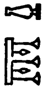
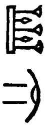
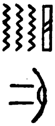
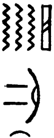
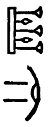
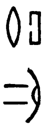
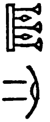
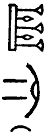
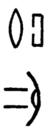
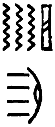
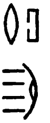
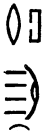
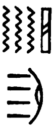
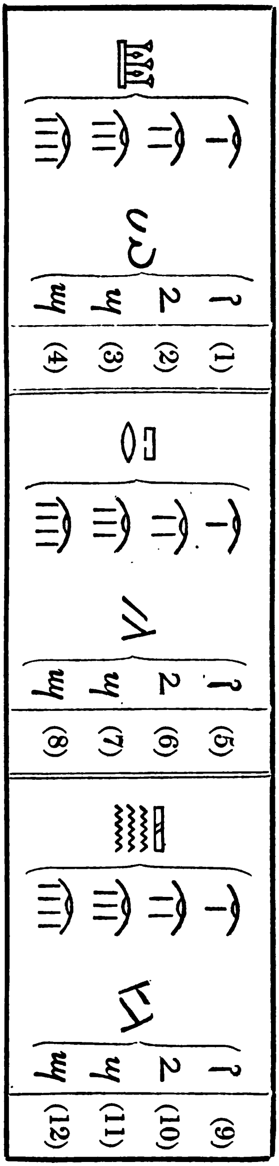
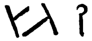
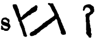
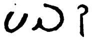
* "Grundzüge," p. 581; comp. "Zeitrechnung der Babylonier und Assyrer," Heidelberg, 1852.

Given Julian Date.	Corresponding given Egyptian Date in the hieroglyphic text.	Egyptian Dates, corresponding to the given Julian Dates, in the Kalendars of		
		Champollion.	Lepsius.	Brugsch.
B.C. 197, Oct. 11.	 (1 Thot)	 (1 Pachon)	 (1 Thot)	 (1 Thot)
" " Dec. 6.	 (17 Paophi)	 (17 Paoni)	 (17 Paophi)	 (17 Paophi)
" 196, Mar. 27.	 (18 Mechir)	 (18 Paophi)	 (18 Mechir)	 (18 Mechir)
" " Oct. 5.	 (30 Mesori)	 (30 Pharmuti)	 (30 Mesori)	 (30 Mesori)

The results, contained in the preceding table, show that, by the evidence of the Rosetta stone, both the kalendars of Champollion and Professor Lepsius rest on an erroneous interpretation of the Egyptian tetramenies; that Champollion, while correctly explaining and combining with their proper tetramenies the Egyptian months, was, allowing imaginary philological reasons to outweigh the positive testimony of history, wrong in placing, at variance with that testimony, the month of Pachon, and necessarily with it the improper tetrameny, at the commencement of the Egyptian year; and that Professor Lepsius, in proposing his "Reform" of Champollion's erroneous kalendar, committed the egregious mistake, while duly raising the 1 Thot to the head of the Egyptian year, *to leave the season, to which it is attached, behind.* On the other hand, the results of our table exhibit the most perfect accordance between the hieroglyphic dates of the Rosetta stone and the kalendar of Dr. Brugsch; and thus prove to evidence that the latter truly represents the vulgar kalendar of Egypt, and that, consequently, his interpretation of the Egyptian seasons, also, is the *true* interpretation.

I might have added, that the demotic text of the Rosetta inscription leads to the same result. It will be more satisfactory, however, to establish the already proven fact in an independent manner by means of a small number of the many astronomical dates, recorded in Mr. Stobart's astrological tablets, already mentioned. It is true, the months in these tablets are those of the fixed Alexandrinian year, and are simply designated by the number which they hold in that year. For our purpose, however, this makes no difference: firstly, because when the vague Egyptian year of 365 days was, by the introduction of a sixth intercalary day in every fourth year, fixed with the 1 Thot on the 29 August, B.C. 30, the nomenclature of the vague year was retained and the ancient kalendar continued without any interruption in its technical course; and secondly, because the demotic names of the months and their succession, as corresponding to their respective hieroglyphic names, are perfectly known. They are compared in the annexed table.*


(1)
(2)
(3)
(4)
(5)
(6)
(7)
(8)
(9)
(10)
(11)
(12)

Hence, in Champollion's kalendar, page 14,  = 1 Pachon, in that of Professor Lepsius  = 1 Thot, and in that of Dr. Brugsch  = 1 Thot, in the normal Egyptian year, correspond to the 20 July in the Julian kalendar. But, according to the tablets, Saturn f.i. entered the zodiacal sign of ♑ on the fifth day of the third month, in the ninth regnal year of the Emperor Trajan = A.D. 105. The astronomical event occurred about the 1-2 November, A.D. 105. Assuming, hereupon, the intervals between this and each successive date, given in the tablets, for Saturn's entry of a new sign, to be the true intervals,—which we may do, without any material error, for the sake of greater conformity,—we obtain the *given* Julian dates, and the corresponding *given* demotic dates, inserted as such in the following table. Reducing, then, the former to their demotic terms according to each of the three kalendars, the correctness

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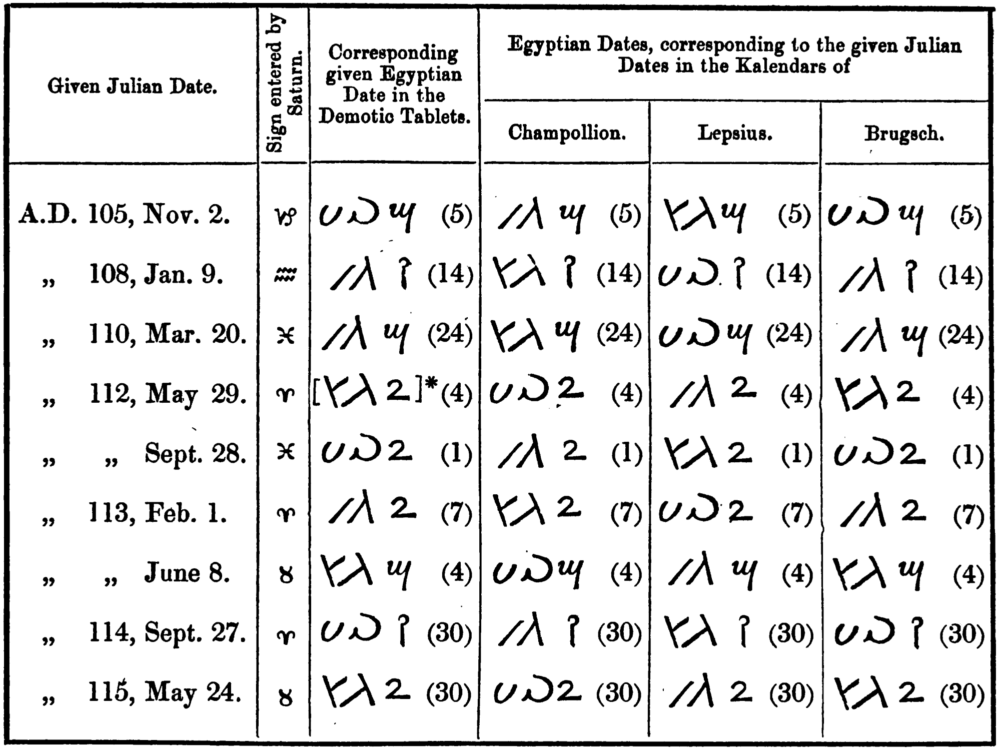
* Comp. *Lepsius*, "Chronologie der Ægypter," p. 134.



Given Julian Date.	Sign entered by Saturn.	Corresponding given Egyptian Date in the Demotic Tablets.	Egyptian Dates, corresponding to the given Julian Dates in the Kalendars of		
			Champollion.	Lepsius.	Brugsch.
A.D. 105, Nov. 2.	♑	(5)	(5)	(5)	(5)
„ 108, Jan. 9.	♒	(14)	(14)	(14)	(14)
„ 110, Mar. 20.	♓	(24)	(24)	(24)	(24)
„ 112, May 29.	♈	[ ]*(4)	(4)	(4)	(4)
„ „ Sept. 28.	♓	(1)	(1)	(1)	(1)
„ 113, Feb. 1.	♈	(7)	(7)	(7)	(7)
„ „ June 8.	♉	(4)	(4)	(4)	(4)
„ 114, Sept. 27.	♈	(30)	(30)	(30)	(30)
„ 115, May 24.	♉	(30)	(30)	(30)	(30)

* Obliterated in the demotic text.

of the latter is tested by a comparison of the demotic dates, *thus computed*, with the corresponding *given* demotic dates; and that kalendar, in which the two series agree, is the true kalendar. It will be seen that this is again the case with the kalendar of Dr. Brugsch.

There is no occasion to extend these comparisons to the other planets, the places of which are recorded in Mr. Stobart's tablets. They would but confirm what, considering the conclusive evidence here adduced, no Egyptologist will any longer be able to question, namely, that Champollion's interpretation of the Egyptian seasons rests on a positive error; that Dr. Brugsch's kalendar truly represents the kalendarian system of the Egyptians; and that, consequently, the chronology of Egyptian history is now placed on an entirely new, and, I may add, for the first time on a solid, basis.

The more interesting it would be, if but one or two of those 373 eclipses of the Sun and 832 eclipses of the Moon, which, Professor Lepsius thinks,* have, during the period of 48,863 years, intervening between Hephaistos and Alexander, not only been observed but also *computed* by the Egyptian horoscopists "with the utmost accuracy and infallibility," remained for us on record. As yet no *certain* indication of their presence has been met with; so far, at least, as is known. Possibly the Berlin savant may reserve the announcement of their discovery for the second volume of his "Chronology," now thirteen years expected. Meanwhile, the only fragmentary passage, noticed as bearing the traces of such a phenomenon, has lately been pointed out by Dr. Brugsch.† It occurs in a very dilapidated and partly illegible inscription on a stele, the introductory date of which is the 9 Thot of the 12th regnal year of an Egyptian king Takelut.

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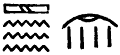
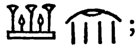
* "Die Chronologie der Ægypter," p. 59 and note 1.

† "Histoire d'Egypte," première partie, Leipzig, 1859, 4to, p. 233.

"Le passage le plus important," Dr. Brugsch observes, ". . . . débute par ces paroles : '*L'an* xv. *le* 24*e jour du mois de Choiac, sous le règne de la Sainteté* de *son père, il arriva que ce pays. . . .*' Une lacune interrompt le texte. Ce qui suit alors. . . . '*le ciel, la lune luttante. . . .*' se rapport indubitablement à un phénomène céleste, dont la cause fut la lune." Dr. Brugsch translates from the stele itself. Mr. Birch renders the text of Young* thus:† "*On the* 25 *Mesori in the* xv*th year of the reign of* [his] *noble father, the ruler of Western Thebes, the heavens were*"—became—"*invisible, the Moon struggling. . . .*".

From these two translations it appears that, while Young read the tetrameny of the text , Dr. Brugsch read it ; and while the former read the numeral of the day 25, the latter read it 24. At my request, therefore, Dr. Brugsch himself has caused the actual reading to be verified; and with that zeal for truth and good faith, which characterises all his researches, has lost no time in informing me that he is in error, and that Young's reading not only is the true one, but that the date of the text also is in a perfect state of preservation.‡

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* "Hieroglyphics," London, 1819, folio, pl. xliii.

† "The Athenæum" for May 11, 1861.

‡ An ignorant Egyptologizer, Mr. Basil H. Cooper, whose strangely eccentric ambition seems to waver between the two objects of "canon"-izing Egyptian history, and of raising himself to the novel and self-constituted dignity of a literary executioner (see the "Literary Gazette" for August 24 and 31, Sept. 21 and 28) charges Dr. Brugsch, on this occasion, with great "blundering," in the columns of the "Athenæum" for May 11, 1861.

The real state of the case, however, at that time was this. Champollion's Egyptian kalendar having long since been relinquished by every chronologer as

This fundamental point, then, having been satisfactorily determined, our first inquiry must be: whether the text, if it speak of an eclipse at all, speaks of a lunar or a solar eclipse. It has been assumed without any reason, that it is a *total* eclipse of the *Moon*, to which the stele alludes. On the contrary, to every oriental scholar, familiar with chronology, it is well known that, according to ancient eastern ideas, it is, in a solar eclipse, *invariably* the Moon, who "struggles" to overpower the Sun; in a lunar eclipse, as invariably the dragon Ragu, who "struggles" to overpower the Moon.* A "struggle" on the part of the Sun in the former case, or on the part of the Moon in the latter case, is never thought of. On the ground of Mr. Birch's translation, therefore, we have every reason to infer that, provided an eclipse is mentioned in the text, it is certainly an eclipse of the Sun, and not one of the Moon, which is referred to.

Our next inquiry has to be: in which year of our era did the

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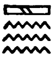
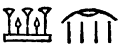
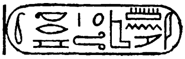
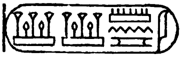
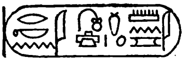
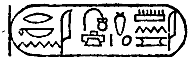
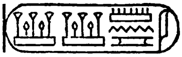
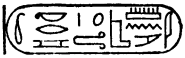
irreconcilable with the positive testimony of history, the followers of Champollion had, thus far, no choice but either to uphold that kalendar in defiance of all historical proof, or else to adopt, for the period from B.C. 2785 downwards, the reformed kalendar of Professor Lepsius. But according to the latter, as a glance at page 14 shows, the fourth month of the season , given by Young, is the month of "Choiac"; and, if a blunder have been committed, it certainly was committed rather by those, who charged Dr. Brugsch with it, and, notwithstanding their acceptance of the Lepsiusian reform, continued to term the month *Choiac* the month "*Mesori*," in positive contradiction with themselves. This is, of course, said with reference to the reading of Young. On the other hand, in regard to Dr. Brugsch's reading, those same Egyptologists, supposing them to reject Professor Lepsius' reform, would, in virtue of Champollion's nomenclature of the months, also have found  to correspond to the month *Choiac.* Hence, whichever reading might by them have been considered the true one, *they* could *consistently* have arrived at no other month for the date in question, save the very date, (erroneously) given by Dr. Brugsch.

* Comp. also the note to p. 163.

15th regnal year of the father of Takelut, the Egyptian king of the inscription, fall? On this point there is much difference of opinion. King Takelut's shield is . He is usually designated as Takelut II. Professor Lepsius* makes him out to be the son and immediate successor of Sesonk (II.) , and Mr. Birch has been asserted by Mr. Basil H. Cooper to approve of this genealogical "arrangement;"† while Dr. Brugsch's statement, assuming Takelut (II.) to be the son of Osorkon (II.) , has by the same unscrupulous "canon"-izer of Egyptian history—Mr. Cooper—been characterised as "a rash and inconsistent conjecture;" and in proof of which, "the genealogy of the XXII. dynasty, as satisfactorily cleared up in Lepsius's admirable monograph," is quoted as an authority.‡

Now, Professor Lepsius, certainly, gives the succession of the fourth, fifth, and sixth kings of the XXII. dynasty as follows:

 —  — 

(IV.) OSORKON II. (V.) SESONK II. (VI.) TAKELUT II.

for it is thus, that they appear in the lithographed plate I, of the essay of that savant, and *according to his "arrangement."* But *what is their succession on the monuments*, or rather on an Apis stele, discovered by M. Mariette, and on which Professor Lepsius himself chiefly bases the arrangement, which shows Sesonk (II.) to be the father and immediate predecessor of

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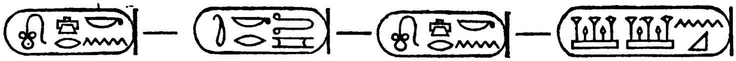
* "The XXII. Egyptian Royal Dynasty," English translation, p. 12 and plate i.

† "The Athenæum" for May 11, 1861.

‡ "The Athenæum" for May 11, 1861.

Takelut (II.)? It is, as recorded by him in pages 8 and 9 of his own treatise, this:



OSORKON (I.) TAKELUT (I.) OSORKON (II.) SESONK (II.)

Hence, the monuments fully bear out Dr. Brugsch in his statement that King Takelut was the son of Osorkon, and leave me only to show on what grounds Professor Lepsius introduces King Sesonk II. *between* them. I will do so in his own words.

Speaking of Manetho's lists, he writes:* "These lists give us only three names in this (the XXII.) dynasty. According to Eusebius, these three would comprise the entire dynasty, but Africanus, on the contrary, gives them with greater exactness as,

I.	Σέσωγχις	governs	21	years.
II.	Ὀσορθών	"	15	"
III.—V.	Ἄλλοι τρεῖς	"	25	"
VI.	Τακέλλωθις	"	13	"
VII.—IX.	Ἄλλοι τρεῖς	"	42	"

These, therefore, together rule 120 years.

" But the total of the specified years is not 120, but only 116. And also, instead of Ὀσορθών we ought certainly to read Ὀσορχών, as the hieroglyphical orthography *Osarkon*, pronounced in the Memphitic dialect *Osarχon*, proves. This list, therefore, shows that not only the first but also the second name in our inscription agrees with that of Manetho. The third, fourth, and fifth names are wanting in his list; our inscription supplies the two next following places; it gives us *Takelut* and a second *Osarkon* for the third and fourth king of the dynasty. The sixth is given in the list; he was a Takelut, and *therefore* the second of his name. Under him died an Apis; and the succeeding Apis tombs, whose epochs and successions we know by Mariette's careful investigations upon the spot, give us the names of the three following kings in a settled order, namely, a *Sesonk*, a *Peχi* (till then unknown), and the latest *Sesonk*, from whose 37th year the stele is dated.

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* "The XXII. Egyptian Royal Dynasty," pp. 11, 12.

" *There is therefore only the fifth king wanting*, whom neither Manetho's list nor the stelæ name. *The other monuments now step in.* These name *four* different *Sesonks*, and *we have in the list hitherto only three;* so that, *as the one wanting finds only one place open,—the fifth—that must be filled with this Sesonk.*

"Thus the entire dynasty is produced with perfect surety, according to their family names, as follows:—1. Sesonk I. 2. Osarkon I. 3. Takelut I. 4. Osarkon II. 5. Sesonk II. 6. Takelut II. 7. Sesonk III. 8. Peχi. 9. Sesonk IV.

" From this series, in the first instance, an important error in our former adopted list is deducible, since the previous third king, *Hor-Petuχanu*, must be entirely *removed* and ascribed to the XXI. The traces of his family connexion with the XXII. dynasty made it previously specious, notwithstanding a break thereby in the direct succession, that he belonged to this dynasty. This supposition can now be rescinded, and *no interruption in the direct succession need be shown.*"*

Such is the "critical" process, by which Professor Lepsius "with perfect surety produces (Egyptian) dynasties." It requires no further comment. The King Takelut of our inscription was the son of King Osorkon;† but as there were several Egyptian kings of either name, it follows by no means as a necessary consequence, that they should be identical with those on M. Mariette's Apis stele. I agree, however, with Dr. Brugsch and Mr. Birch as to that identity, so far as Osorkon II. (of my tables III.) is concerned; but differ from Professor Lepsius, when he assumes that the name of Takelut II. appears on the stele as well. Nor does our inscription state at all, as has been taken for granted, that Takelut II. was *the immediate successor* of Osorkon II. (III.) On the contrary, the latter being qualified as king of Western Thebes, would seem to imply that his son Takelut II. had been king of Eastern Thebes; and in conformity with this inference, we actually do find a double series of kings on record at the period in question.

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* The English translation is Dr. Bell's, who, in his unsuccessful attempt to acquire a knowledge of the German language, would seem to have forgotten his own. It is but doing justice to Professor Lepsius to remark, that he writes classical German.

† This is virtually once more acknowledged by Professor Lepsius himself,

So long as ten years ago this was pointed out by me, and the reign of Takelut II. (in Eastern Thebes) supposed to have been cotemporary with that of Sesonk II. (of my table III.) (in Western Thebes); while, at the same time, I placed the epoch of the reign of Osorkon II. (of my tables III.), the father of Takelut II., in the year —852 or B.C. 853.* The 15th regnal year of the former would, consequently, fall about the year B.C. 839; and in or near this year, *thus independently established on historical grounds*, the supposed eclipse should be sought on

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when ("The XXII. Egyptian Royal Dynasty," p. 14) he writes thus: "This king (Osàrkon II.) had a son Sesonk, as appears from the inscriptions of a statue found in the Apis cave, and by a second wife, Karoama. We have shown above that a Sesonk must be put in the place of the fifth king; *though this name appear neither in Manetho's Lists, nor is found on the Apis stele which has hitherto vouched for the order of these names.* We cannot therefore doubt that this Prince Sesonk, a son of Osarkon II., succeeded his father as Sesonk II. in the government, and the shields belong to him which hitherto, as far as I know, are only found on a scarabæus which I possess in a cast, and which was furnished me by M. Migliarini in Florence."

* "Die Zeitrechnung der Babylonier und Assyrer," Heidelberg, 1852, p. 172.

the 25th day of Mesori, i. e. on or near the 10 March about the year B.C. 839.

On the contrary, Mr. Basil H. Cooper, starting on the naked assumption that our text speaks of a total eclipse of the Moon, goes in search of "a suitable eclipse" of the desired kind, in "the invaluable table given in 'L'Art de Vérifier les Dates,'" and at last fixes upon one, that "fell out on the evening of the 16 March, B.C. 851;" perfectly unconscious of reckoning according to a purely imaginary kalendar, which never was in use,—unless it have been so, as Professor Lepsius assures us, *previously to the year B.C.* 2785,—and that in the kalendar, introduced in its stead by the Berlin savant, the date of the inscription is no longer the 25 Mesori, but the 25 Choiac, and answers to the 13 July, B.C. 851.

This, however, is of no consequence now. The true date of the inscription is the 13 March, supposing the year B.C. 851 to be in question; and that a total eclipse of the Moon, visible in Egypt, occurred on March 16, B.C. 851, is certain. Yet, this date, as that of the 15th regnal year of Osorkon II. (III.), is wholly inadmissible: partly because the inscription so decidedly favors the supposition of an eclipse of the Sun, instead of one of the Moon; but more particularly because the date of the lunar eclipse in question corresponds in the year B.C. 851 to the 28th, while the text reads the 25th, Mesori; and because the year is positively at variance with the entire course of the history of those times, so far as it is known to us.

On the other hand, there happened an eclipse of the Sun about the very year, in which the 15th regnal year of Osorkon II. (III.) may historically be taken to fall, namely, in the year B.C. 841, and about the very day, stated in the inscription, namely, on the 11 March. According to a preliminary computation of this eclipse from M. Largeteau's tables,—which suffices for our purpose,—it was visible in Egypt as a partial eclipse, the greatest phase of obscuration occurring at about 4h. 35m. p.m. mean time at Thebes. And, as in the same year B.C. 841, the 1 Thot fell on the 21 March, the 11 March corresponded to the preceding 25 Mesori, in perfect accordance with the text. Hence, there can be no historical doubt but that it is the solar eclipse of March 11, B.C. 841, which is recorded in the inscription; that the latter has been correctly interpreted by Mr. Birch; and that the epoch of the reign of Osorkon II. (III.) will consequently have to be placed in the year B.C. 855, instead of the year B.C. 853, as independently determined by me on general historical grounds.

In confirmation of this astronomical date, I have still to adduce a second one, also first pointed out by Dr. Brugsch and mentioned by Mr. Cooper.* It is a statement, contained in an Egyptian inscription, to the effect that, in the eleventh regnal year of Takelut II., Sirius had risen heliacally on the 1 Tybi. According to my tables, the epoch of the reign of Takelut II. fell in the year B.C. 842. His eleventh regnal year, therefore, concurred with the year B.C. 832, and in this year Sirius, in the vulgar Egyptian kalendar, should have risen heliacally on the 1 Tybi, according to the inscription and my chronology. Now, Sirius did so rise in the years B.C. 835—B.C. 831, a period which includes the year in question; showing that the epoch of the reign of Takelut II. is comprised in the interval B.C. 845—B.C. 841. The epochs of the two reigns of Osorkon II. (III.), king of Western Thebes, and of Takelut II., king of Eastern Thebes, may consequently be considered to be astronomically established, the former absolutely, the latter with a margin of one year later or two years earlier.

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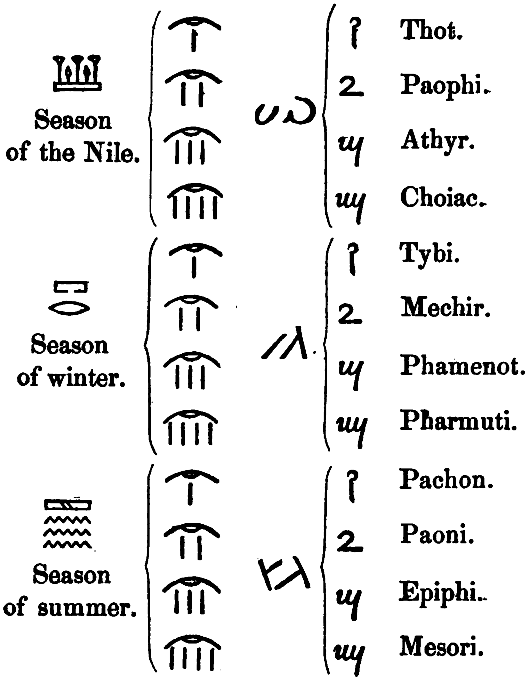
* "The Athenæum" for May 11, 1861.

I have thus, by a series of historical and astronomical data, both in hieroglyphic and demotic writing, furnished the positive proof that the following is the true nomenclature of the Egyptian seasons and months:



The importance of this discovery, for which Egyptology is indebted to Dr. Brugsch, I need hardly point out. As I have already had occasion to remark: it has enabled me to place the chronology of Egyptian history on an entirely new, and for the first time on a solid, basis.

II.

ON THE EPOCH OF THE REIGN OF MENES.

INDIVIDUALS are but so many types of their species. The history of every one of us is a miniature of the history of the human race. Who is able to trace his recollections beyond a certain epoch of his existence? Our origin and the first period of our infancy, so far as our personal knowledge goes, are shrouded in complete and impenetrable secrecy. The same is the case with the earliest history of mankind. It will never be disclosed to us; or, at the best, we have no reasonable hope that it ever will. The inhabitants of no other worlds were called in by God to witness the birth of man, that they might relate to him what they beheld. How, then, are we to succeed in tracing the history of our race to its origin or even to its cradle?

It is true, that numerous attempts to this end have been made and, no doubt, will continue to be made, in all times. But, upon examination, what do we find them to be? The mere flights of a wild and ungoverned imagination, soaring far above the highest land-marks of history, and viewing the latter, from the dreamy regions of theory and speculation, only as so many *conveniences* placed in the ocean of time for its special use. Yet such indulgences of the fancy are presented to the public as the results of profound chronological research and learning. Harmless enough in themselves, they unfortunately tend to discredit, in the public opinion, a science so little understood and appreciated as is chronology, though not improperly termed the backbone of history, and yielding in importance to few other branches of human knowledge.

But whilst the earliest infancy of our race is involved in inscrutable mystery, so, as there is a period in the life of individual man, to which his clearly defined recollections carry him back, is there a corresponding period in the existence of mankind, to which its accredited history may be traced, and which is emphatically termed *the historical epoch.* It would seem to reach nearly 5,000 years into the past, or to fall between the 25th and the 30th century before the Christian era. At least, the chronological traditions of those ancient nations, with whose history we are sufficiently acquainted, point without exception to that period as comprising the epochs of the reigns of their earliest recorded kings. The authentic history of the lands of the Nile alone is by some Egyptologists asserted to ascend to far remoter ages.*

Thus Bunsen—who places the creation of the first man about the year B.C. 20,000, as the "most favorable epoch for our northern hemisphere; not, however, upon the declivities of the Himalaya mountains, but in the more northern parts of Asia,"† and traces the history of language and of its grammatical structure up to the same period*—assigns the year B.C. 9085 as the epoch of the reign of Bytis, the first *priestly* king of Thebes; whilst he states the reign of the first *elected* king of Egypt to have commenced in the year B.C. 7230, and that of her first *hereditary* king in the year B.C. 5413. He, then, in B.C. 3974 (3973) divides the empire into Upper and Lower Egypt in order to reunite it, 350 years later, in B.C. 3623, under Menes, its first *historical* king,† the epoch of whose reign is by Professor Lepsius placed in the year B.C. 3893.‡ No rational person would wish me to follow Bunsen into the regions of his extravagant speculation. Being unconnected with the Prussian Expedition to Egypt, undertaken in 1842 at the personal expense of the late King Frederick William IV.—one of the most enlightened and munificent patrons of science in our time,—and entrusted by him to the direction of Professor Lepsius, I do not feel in duty bound to compose proskynematic§ inscriptions in a language which I do not understand,‖ and to produce for the thousands of Prussian Fredericks-d'or spent, as many centuries of Egyptian antiquity. Still, untenable as certain hypotheses concerning the age of the Egyptian kingdom may be, they are, as regards the epochs assigned by Bunsen and Professor Lepsius to the reign of Menes, not altogether devoid of traditional support; and the question as to the antiquity of the accredited history of Egypt, therefore, presents a deep interest, not merely in a chronological point of view, but also in reference to the history of our species.

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* "The most important result of modern research concerning Egypt since Champollion's time, is *the great antiquity* of Egyptian history," Professor Lepsius asserts. "The fact that, amidst the mythologies of all other nations, and reaching far beyond even their legendary ages, the people of Egypt are found to possess a real history and a highly developed civilisation, attested by their annalists and positively authenticated by their remaining monuments: this fact, I say, which science is now no longer able to question, is of higher importance to the progress of man's knowledge relative to his past, than any particular event of the history, or any special feature of the civilisation, of that people."

"Ueber die Manethonische Bestimmung des Umfanges der Ægyptischen Geschichte," in the "Abh. der Berliner Akademie des Wissenschaften," Berlin, 1857, 4to, p. i. 83.

† "Ægypten's Stelle in der Weltgeschichte," Gotha, 1845-1857, 5 vols. 8vo, vol. iv. preface, p. xi.

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* "Ægypten's Stelle in der Weltgeschichte," vol. v. i. pp. 69 sqq.; comp. vol. v. ii. pp. 343 sqq.

† "Ægypten's Stelle in der Weltgeschichte," vol. v. ii. pp. 346 sqq.

‡ "Die Chronologie der Ægypter," Berlin, 1849, vol. i. 4to, p. 499.

§ *Lepsius*, "Briefe aus Ægypten," Berlin, 1852, 8vo, p. 30; comp. above p. 18 sq.

‖ See the note (‡) to p. 18.

That Menes was the first historical king of Egypt is universally allowed. But while M. Lesueur places the epoch of his reign as high as B.C. 5773,* Böckh as high as B.C. 5702,† Mr. Poole brings it down to B.C. 2717,‡ Mr. Nolan to B.C. 2673,§ and Mr. Osborn to B.C. 2429.|| Thus, the two systems of chronology, of which the above numbers are the exponents, and familiarly termed the *long* and the *short* chronologies, are seen to differ by a space of time varying from 900 to 3,300 years,—naked figures, which barely convey to us an idea of their historical import. If we would form such an idea, let us suppose that, at some future period of the world's history, chronologers were to raise the question, whether Victoria I. of England reigned in the days of Napoleon III. of France, or in the time of Moses, the great lawgiver of the Jews? Whether from the 13th century before, to the 19th century after, Christ, there had or had not existed a British empire under the rule of princes *posterior* to Victoria I.? And let it be remembered that, under the former supposition, not only the reign of her present Majesty and the entire history of England would have to be thrown back into the past beyond the period of the Jewish Exodus, but that also the vast gulph of time, thus created, would have to be filled up again with new events of

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* "Chronologie des Rois d'Egypte," Paris, 1848, 4to, p. 310.

† "Manetho und die Hundssternperiode," Berlin, 1845, 8vo, p. 386.

‡ "Horæ Ægyptiacæ; or, the Chronology of Ancient Egypt," London, 1851, 8vo, pp. 96 sqq.; p. 210.

§ "The Egyptian Chronology analysed," London, 1848, 8vo, p. 30.

|| "The Monumental History of Egypt," London, 1854, 2 vols. 8vo, vol. ii. p. 634.

English history, and that the battles of the Alma and of Inkermann, and the fall of Sebastopol, supposed to have taken place 3,000 years ago, would have to be connected with the history of the year A.D. 1857. Unfortunately, we know almost as little of the early events of Egyptian history, as we do of those of the next ten or thirty centuries to come, and still less of their sequence and connection. Bare names and numbers, admitting of a ready adaptation to any chronological system, is nearly all that tradition has handed down to us of the remotest history of the lands of the Nile.

As it is now generally admitted, that Manetho's list of Egyptian dynasties, in the form in which it has reached us, observes no consecutive chronological order, but that some at least of those dynasties reigned contemporary with each other, I may be permitted to pass over in silence the two chronological systems, advanced by M. Lesueur and Professor Böckh, and still resting on the contrary supposition; the latter savant making the epoch of the first year of Hephaistos to coincide with the 20 July, B.C. 30,522. There remain thus only two *long* systems, those of Bunsen and Professor Lepsius, to examine,—a task greatly facilitated by the circumstance, that both rest their respective systems exclusively on a certain number of "3,555 years," which the *true* Manetho,* they assert, states to have elapsed from the reign of Menes to the death of the younger Nectanebus in the year B.C. 340, and which would raise the former epoch to the year B.C. 3895. This epoch Professor Lepsius adopts; only that, taking the 3,555 years to be vague Egyptian years of 365 days, he lowers it to the Julian year B.C. 3893,* in contradiction with himself, since he himself insists that Manetho reckons according to solar years of 365¼ days,† as is really the case. Bunsen, on

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* The "true" Manetho, as distinguished from the "pseudo"-Manetho, of Bunsen and Professor Lepsius is simply their own creation, to serve their own chronological purposes. Professor Lepsius recognizes in the "true" Manetho "a serious, intelligent, truth-seeking man, who, in all his statements, *faithfully adhered to his ancient sources*" ("Die Chronologie der Ægypter," p. 407), and to whom the Sothis, by Syncellus held to be his genuine historical work, cannot possibly be attributed (p. 414). On the contrary: its author, the "pseudo"-Manetho, was evidently a Christian, who intended by the authority of Manetho's name to support *the chronology of the Bible* (pp. 478, 435), and, like all other Christian chronologists, *hesitated not to falsify the authentic dates accordingly* (pp. 435, 470, 471). Nor does he consider it at all probable, that Josephus, Africanus,

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or any other of our present authorities ever saw the genuine work of Manetho; from which, however, we are by no means to conclude, that their quotations from it be *not* Manethonic and *altogether* of an unreliable character (pp. 541, 542). Hence the chronological use of the two Manethos in the systems of Bunsen and Professor Lepsius will be readily divined.

* "Die Chronologie der Ægypter," p. 499.

† Professor Lepsius ("Transactions of the Chronological Institute," London, 1858, vol. i. supplementary leaf between pp. 164, 165) denies this to be the case. Speaking of myself, he observes: "I do not consider it necessary to enter into a consideration of his own views of Manetho's history, since there seems no danger that it will find adherents. I might be more disposed to throw back upon him some remarkable revelations, which abound in contradictions and inaccuracies void of all foundation." Professor Lepsius' tactics are by this time well enough known, to require any further notice on my part. "Thus," however, he goes on to say by way of illustrating them, "at p. 144, it is said, I take the 3,555 years from Menes to Ochus as *vague* in contradiction with myself. At another place of my chronology (*where* is not said) I am made to assert that Manetho reckoned according to fixed Alexandrian years; and, p. 147, that I somewhere placed the compass of the 13th Sothic cycle in the year B.C. 4245, reckoning by years of 365¼ days. Now I said expressly in my chronology, p. 501, that Manetho counted the mundane records of Egyptian history by *vague* years. It would have been irrational to suppose Manetho used a different computation for the dynasties from Menes forward, and Herr von Gumpach is in error when he believes he has found a contradictory passage in my book."

Rather in explanation and excuse of the numberless contradictions, errors, and absurdities, which occur in Professor Lepsius' work on Egyptian chronology, than for any other purpose, I will quote, from p. 549, his "note to p. 17," which reads thus: "This was printed before I had completed my investigation into the premosaic times, and has now to be corrected in conformity with what is said pp. 379 sqq." The plain truth is, that Professor Lepsius was no more prepared, linguistically, chronologically, or astronomically, to write the work which he undertook on so extensive and presumptuous a scale, than a school-boy might have the other hand, with that inconsistency which so greatly distinguishes his work on Egypt, after repeatedly urging the indubitable authenticity and paramount importance of the Manethonian number of 3,555 years, and adopting it for the two periods of the new empire and the Hyksos time, rejects it as regards the duration of the old empire in favor of the Canon of

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been; and it will never, therefore, whether completed or left unfinished, possess a higher scientific value than that of a premature essay and an expensively got up failure.

To return, however, to his anti-critical remarks. They are not very clear. He would seem to deny in the first sentence, that the 3,555 years between Menes and Nectanebus II. are reckoned by him as *vague* years of 365 days; but in the next following sentence, he pointedly affirms it himself. Probably, therefore, he only meant to deny his doing so *in contradiction with himself*, and his *no*where making Manetho to reckon "according to fixed Alexandrian," i.e. according to solar years of 365¼ days. Yet he devotes the whole space pp. 470-482 of his "Chronology" to the latter proof as regards the period of the gods, and remarks, p. 474: "We find the sum to be 17,520 years or 12 Sothic periods of 1,460 years, *i.e. of solar years, as was to be expected would be the case for the reign of the Gods.*"

Professor Lepsius, by assuming that Manetho adopts vague years *since Menes*, lowers the early epochs of Manetho's history, reckoned upwards from B.C. 340, its fixed terminus, by $\frac{3555}{4} = 2$ years, 158 days, 6 hours, for the reign of Menes, and by $\frac{3905}{4} = 2$ years, 245 days, 18 hours, for that of the 10 Thinite Kings or the conclusion of the reign of the demi-gods. It would be about as rational to assume an annalist of our own time to reckon from the Creation to Pope Gregory XIII. in Gregorian or Astronomical years of 365 days, 5h. 48m. 47s. 8,091 — t. 0″·00595, and from Gregory XIII. downwards in Julian years of 365 days, 6 hours.

Nor is this all. At p. 165, Professor Lepsius observes: "We have seen that, besides the civil year of 365 days, *the Egyptian priests used in their* [chronological] *lists a fixed year of* 365¼ *days;*" and p. 407: "Manetho. . . . *the Egyptian priest* and keeper of the records. . . . , to whom the learning of the Egyptian priesthood was as a profession. . . . , adhered *in all his statements* faithfully to the ancient sources."

As to the third point denied by Professor Lepsius, the reader is referred to a subsequent note. All I have here still to remark is, that the author of the "Chronologie der Ægypter" forces upon his "true" Manetho the two contradictory methods of chronological reckoning for the only purpose of connecting it with the year B.C. 1322, *which he erroneously believes to be the epoch of a Sothic period;* whereas the true epoch is the year B.C. 1325 (comp. p. 24, and the note (*) to p. 20), which implies the perfect consistency of the Manethonian computation.

Eratosthenes, which he calculates to be shorter by 271 years.[*] It is thus (and by an error of one year) that he obtains for the commencement of the reign of Menes the year B.C. (3624) 3623, instead of the year B.C. 3895. But notwithstanding this modified acceptation of the number in question, on Bunsen's part, his entire system of Egyptian chronology depends as much on it, as does that of Professor Lepsius. To prove, therefore, the unhistorical character of that fundamental date, is to overthrow the very basis upon which both their chronological systems are made to rest, and, consequently, to overthrow those systems themselves.

The passage of Syncellus, in which the number of 3,555 years occurs, reads, according to Dindorf's edition,[†] thus:

Ὁ δὲ παρ' Αἰγυπτίοις ἐπισημότατος Μανεθῶ περὶ τῶν αὐτῶν λ' δυναστειῶν γράψας ἐκ τούτων δηλαλὴ λαβὼν τὰς ἀφορμας κατὰ πολὺ διαφωνεῖ περὶ τοὺς χρόνους πρὸς ταῦτα, καθὼς ἔστι καὶ ἐκ τῶν προειρημένων ἡμῖν ἀνωτέρω μαθεῖν καὶ ἐκ τῶν ἑξῆς λεχθησομένων. τῶν γὰρ ἐν τοῖς τρισὶ τόμοις ριγ' γενεῶν ἐν δυναστείαις λ' ἀναγεργαμμένων, αὐτῶν ὁ χρόνος τὰ πάντα συνῆξεν ἔτη ,γφνε', ἀρξάμενα τῷ ,αφπς' ἔτει τοῦ κόσμου καὶ λήξαντα εἰς τὸ ,ερμζ' κοσμικὸν ἔτος, ἤτοι πρὸ τῆς Ἀλεξάνδρου τοῦ Μακεδόνος κοσμοκρατορίας ἔτη που ιε'· ἐκ τούτων οὖν ἀφελών τις τὰ πρὸ τοῦ κατακλυσμοῦ χνς' πρὸς ἀναπλήρωσιν τῶν ,βσμβ' ἐξ Ἀδὰμ ἕως τοῦ κατακλυσμοῦ, ὡς ψευδῆ καὶ ἀνύπαρκτα, καὶ τὰ ἀπὸ τοῦ κατακλυσμοῦ ἕως τῆς πυργαποιίας καὶ συγχύσεως τῶν γλωσσῶν καὶ διασπορᾶς τῶν ἐθνῶν φλδ', ἕξει σαφῶς τὴν ἀρχὴν τῆς Αἰγυπτιακῆς βασιλείας ἐκ τοῦ πρώτου βασιλεύσαντος

Manethon antem nobilissimus apud Ægyptios scriptor, de triginta eorum dynastiis tractaturus, ex his occasione sumpta, ab eis plurimum iuxta superius adducta ac deinceps quoque dicenda, dissentire comperitur. Familiarum enim 113 per dynastias tringinta libris tribus ab eo descriptarum tempus omne 3,555 annis, mundi 1,586, narrationem incipientibus, ac demum 5,147 desinentibus, ante Alexandri Macedonis imperii annum circiter quintum decimum, concluditur. Ex his qui 656 diluvium præcedentes annos ad 2,242 ab Adamo ad diluvium usque requisitos, ceu fictos ac nulla tenus probandos sustulerit, ac iterum 534 retro diluvium, ad turrim usque conditam et linguarum confusionem et nationum dispersionem; cernet manifeste Ægyptiaci regni a primo rege Mestraim, qui Manethoni Menæus, ad Nectanabo ultimo loco regnantem anno

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[*] "Ægypten's Stelle in der Weltgeschichte," vol. iv. p. 106.

[†] Bonnæ, 1829, vol. i. pp. 97, 98.

τῆς Αἰγύπτου Μεστραΐμ, τοῦ καὶ Μήνεος λεγομένου παρὰ τῷ Μανεθῶ, ἀπὸ τοῦ ͵βψος´ ἔτους τοῦ ἐξ Ἀδὰμ ἕως Νεκταναβῶ τοῦ ἐσχάτου βασιλέως Αἰγύπτου, ὡς εἶναι τὰ πάντα ἀπὸ Μεστραΐμ ἕως τοῦ αὐτοῦ Νεκταναβῶ ἔτη ͵βτξε´, ἃ καὶ ἔφθασεν, ὡς προείρηται, εἰς τὸκοσμ ικὸν ͵ερμζ´ ἔτος πρὸ τῆς Ἀλεξάνδρου τοῦ κτίστου ἀρχῆς, ἔτεσι ιε´ ἐγγύς.

ab Adamo condito 2776 posita fundamenta, ita ut anni omnes a Mestrem usque ad Nectanabo lapsi sint numero 2,365, quorum terminum attigit hic, ut præmissimus, anno mundi 5147, ante Alexandri conditoris imperium, annos circiter quindecim.

From this passage both Bunsen and Professor Lepsius select the date of "3,555 years" as alone suitable for their purpose, and altogether disregard that of the "113 generations," inseparably connected, and at the same time utterly irreconcilable, with it, in as much as the mean duration of 30½ years for a long series of successive reigns, which the former number supposes, is contrary to all human experience. One only of the two numbers, therefore, can be historical; the other must, of necessity, be fictitious.

What reason, then, do Bunsen and Professor Lepsius assign for their choice? In the first place, Bunsen* urges the intact character of the number of "3,555 years," but does not attempt to prove the corruptness of the "113 generations." The simple fact that "no clerical error has crept into the date," as Syncellus found it recorded, can as little establish its historical character, as it is calculated to convince us, that the work, from which it was taken, was that of the "true" Manetho. On the contrary, the irreconcilable nature of the two combined dates would naturally lead us to form a different conclusion. A second and last reason in favor of the "3,555 years," adduced by Bunsen and repeated by Professor Lepsius, I will presently consider.

The latter savant has, at least, seen the necessity of some notice being taken of the "113 generations," and, bolder than Bunsen, attempts to discredit its historical character by a truly desperate argument. "When finally," he writes,* "Syncellus makes mention in this place of the 113 generations which, *for reasons already assigned*, belong exclusively to the Old Chronicle, he does so merely in consequence of his frivolously confounding what immediately precedes; unless, indeed, the date should have got into the text by the wisdom of some later copyist." Alas, for poor wisdom! she is made to serve many a purpose, and to cover a multitude of sins. But Professor Lepsius' "reasons already assigned"? On turning to the place, to which alone he can refer,† we read thus: "New in the Old Chronicle are, at all events, the 113 generations." Not a syllable more does he say. That sole assertion constitutes his "reasons already assigned." Nay, as appears from his own work, he must have been fully aware that they did *not*, as he pretends, "exclusively belong to the Old Chronicle." At any rate, there they remain, equally unmoved by his "wisdom" and his "frivolity."

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* "Ægypten's Stelle in der Weltgeschichte," vol. i. pp. 122, 123.

In a subsequent memoir, therefore, he has, for the purpose of setting the obnoxious date aside, recourse to a more sweeping process, which I will describe in his own words. "The passage in Syncellus, p. 52, D," Professor Lepsius argues,‡ "as it now stands, has evidently been corrupted by glossary remarks having crept into the text. Already on a former occasion I have remarked, that the words *αὐτῶν ὁ χρόνος* completely interrupt its grammatical connection, and have therefore to be erased

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* *Lepsius*, "Die Chronologie der Ægypter," vol. i. p. 497.

† "Die Chronologie der Ægypter," vol. i. p. 447.

‡ "Ueber die Maneth. Bestimmung des Umfanges der Ægypt, Geschichte," pp. 198, 199.

('Chronology,' p. 467); while I have previously shown, that Syncellus originally wrote 5141 for the year 5147, as a marginal note of Codex A (p. 53, A) has it, and consequently also *ἀρχῆς*, which we actually read a few lines further on, instead of *κοσμοκρατορίας*. But, on mature consideration, it can neither admit of a doubt, but that the number 113 joined to *γενεῶν* has been introduced by mistake. Of whatever degree of negligence and vagueness of expression we may hold Syncellus capable, it is utterly impossible that he should in this place have transferred the 113 generations from the Old Chronicle to Manethôs. A copyist alone could put into the text a number, the presence of which on the margin is easily enough accounted for, but certainly not Syncellus, who wrote the introductory remarks to the dynasties of the true Manethôs with their hundreds of generations. Nay, I think I may go further still, and declare also the number 30 before *δυναστειῶν* to have slipped into the text simultaneously with the number 113, although they, being allowed to remain, would not materially alter the sense. The whole passage, according to my conviction, originally read thus:

> *Ὁ δὲ παῤ Αἰγυπτίοις ἐπισημότατος Μανεθῶ περὶ τῶν αὐτῶν* [λ′] *δυναστειῶν γράψας, ἐκ τούτων δηλαδὴ λαβὼν τὰς ἀφορμὰς, κατὰ πολὺ διαφωνεῖ περὶ τοὺς χρόνους πρός ταύτας* (thus we should, perhaps, read for *πρὸς ταῦτα*), *καθὼς ἔστι καὶ ἐκ τῶν προειρημένων ἡμῖν ἀνωτέρω μαθεῖν καὶ ἐκ τῶν ἑξῆς λεχθησομένων. τῶν γὰρ ἐν τοῖς τρισὶ τόμοις* [ριγ′] *γενεῶν ἐν δυναστείας λ′ ἀναγεγραμμένων,* [*αὐτῶν ὁ χρόνος*] *τὰ πάντα συνῆξεν ἔτη ,γφνέ, ἀρξάμενα τῷ ,αφπς′ ἔτει τοῦ κόσμου καὶ λήξαντα εἰς τὸ* [*,ερμζ′* lege:] *,ερμ′ κοσμικὸν ἔτος, ἤτοι πρὸ τῆς Ἀλεξάνδρου τοῦ Μακεδόνος* [*κοσμοκρατορίας* lege:] *ἀρχῆς ἔτη που ιε′.*

"All the five alterations, which I have made, are entirely independent of the origin of the number 3,555. They would be quite as necessary, if any person were to deduce the number from the Sothis. As the *αἱ αὐταὶ δυναστεῖαι*, mentioned, refer to the Old Chronicle, without its being here named, somebody wrote on the margin, that this Chronicle treated of 113 generations under 30 dynasties. This explains the two first interpolations, probably also the third, as it is likely that, for the sake of comparison, the whole number of years of the Old Chronicle was marked down on the margin as well, just as Syncellus himself had written it down on the preceding page: λʹ δυναστειῶν —γενεαὶ ριγʹ—αὐτῶν ὁ χρόνος Μγʹ καὶ ,ϛφκεʹ. The two last variations, on the contrary, may either owe their later origin to Syncellus himself, although this is highly improbable, or else to the glossary remark of some reader, who had noticed the contradiction with p. 257."

Leaving this libel upon criticism to speak for itself, I will revert to the reasons which Professor Lepsius adduces in support of the "3,555 years." "This number," he argues,* "must under any circumstances be regarded as a traditional one, *handed down* to Syncellus, who treats it as of so great importance that, without connecting it with any other dates, he places it, as the sum of Manetho's chronology, in opposition to the Old Chronicle, and starts from it in establishing his own biblical epoch for the history of Egypt." But this reason is a sorry one indeed. The 17,520 years, which Manetho states the gods and demi-gods to have reigned, are no less a traditional number, "handed down" to Syncellus, than are the 3,555 years. And so far from attaching any importance to the latter date, he treats it, according to the very statement of Professor Lepsius, ever in contradiction with himself, as a "lying" number, which he unhesitatingly reduces to 2,365 years, by deducting from it two periods of 656 and 534 years as purely fictitious,—"a stupid process,"† in Bunsen's opinion, though on a somewhat more limited scale *adopted by himself.*‡

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* "Die Chronologie der Ægypter," p. 492.

† "Ægypten's Stelle in der Weltgeschichte," vol. i. pp. 122, 123.

‡ "Ægypten's Stelle in der Weltgesch." vol. iv. p. 106; comp. pp. 44, 45 above.

Professor Lepsius' second reason is as futile as we have found his first one to be. It demands some preliminary remarks. The "true" Manetho divided his historical work into Sothic cycles. He commenced and ended the reign of the gods and demi-gods and, consequently, commenced again his human history with epochs of that cycle. It is thus he reckons:

			B.C.
Reign of the gods commences with the epoch of the 1st cycle		=	20 July, 21,765
namely: gods ....13,870 years demi-gods... 3,650 „	12 cycles..................	=	17,520
Human history commences with the epoch of the 13th cycle ...		=	20 July, 4245
and comprises:			
10 pre-historical generations, Thinites	350 years		
	1,100 years		1460
30 historical dynasties with Menes at their head, together 3,555 years in 113 successive reigns, concluding at the extinction of the Egyptian kingdom in the 986th year of the 15th Sothic cycle...	epoch of the 14th cycle ...	=	20 July, 2785
	1,460 years...	=	1460
	epoch of the 15th cycle ...	=	20 July, 1325
	985 years...	=	985
	3,555 years		
		=	B.C. 340

This statement differs only in one point from the views of Professor Lepsius, in as much as he makes the epochs of the Sothic cycles, from the 13th cycle downwards, fall three years later, although, as I have already had occasion to remark, he himself insists that Manetho reckons according to fixed years of 365¼ days,* and, moreover, that the epoch of the 13th cycle actually did fall in the year B.C. 4245, instead of the year B.C. 4242.† Nor can the corresponding commencement of the 15th cycle, on the 20th July, B.C. 1325, instead of B.C. 1322, as commonly assumed, any longer, I venture to think, be subject to a doubt; the astronomical and historical proofs, which I have had occasion to adduce to that effect, being conclusive.*

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* See note (†) to p. 43 above.

† In the same note we have seen, that Professor Lepsius denies that he "anywhere places the epoch of the 13th Sothic cycle in the year B.C. 4245, reckoning by years of 365¼ days." What I really say, is seen from the text. That Professor Lepsius, in contradiction with himself, insists on Manetho reckoning in years of 365¼ days I have already shown. As to his "somewhere" stating, that the epoch of the 13th cycle actually fell in the year B.C. 4245, and which he denies by referring

Professor Lepsius, now, argues thus:† From Manetho's mode of arrangement, we should have been led to expect that he would have made the first year of the first historical king, Menes, to coincide with an epoch of the Sothic cycle. But, on the contrary, it is seen not only that, according to Manetho,

to page 501 of his "Chronology," I will from the note 2 *to that very page* quote his own words. "I had long before looked upon the 3,555 years from Menes to Ochus, and the 12 Sothic periods to the end of the reign of the demi-gods, as firmly established, when it first struck me that the epoch of the 350 years of the Thinites *coincided with the commencement of a Sothic period.* The year B.C. 340 + 3,555 leading immediately to the year B.C. 3895, the 350 years of the Thinites carry us back three years *beyond* the epoch 4242, *namely, to the year B.C.* 4245." Professor Lepsius, certainly, hereupon attempts to "explain away this excess of three years;" but he does so again in contradiction with himself, and at all events leaves the fact remaining.

* "Die Zeitrechnung der Babylonier und Assyrer;" "Zwei Chronologische Abhandlungen;" comp. also p. 24 and note (*) to p. 20. I may be permitted to take this opportunity of stating, that since the appearance of the latter essay, two Demotic inscriptions, comprising years of the Apis cycle with regnal years of a king of Egypt, have been published by Dr. Brugsch in his "Demotic Grammar." Unfortunately they both refer to the same reign, that of one of the Ptolemies, whose 32nd and 33rd years are said to correspond with the 2nd and 3rd years of the Apis cycle. The Ptolemy meant can only be Philadelphus Philometor or Soter. Dr. Brugsch supposes the inscriptions to date from the reign of the former; but his reasons apply with greater force to Philometor, who succeeded in the year A.N. 568. His 32nd and 33rd years would therefore be A.N. 599 and 600. Now, I have proved the year A.N. 223 to have been the first year of an Apis period. Consequently, adding 15 completed cycles = 375 Egyptian years, the year A.N. 598 would be the epoch of another cycle, and the 2nd and 3rd years of the latter correspond with the years A.N. 599 and 600, in the most perfect accordance with the inscriptions. The anomalous epoch of the 6 Phamenoth A.N. 584, adopted by Professor Lepsius, agrees with neither of the reigns in question. Indeed, he should never have permitted his fanciful views regarding the Apis cycle to meet the eyes of chronologers.

† "Die Chronologie der Ægypter," vol. i. pp. 499, 500.

the epoch of the reign of Menes does *not* fall upon such an epoch, but that the Egyptian historian, moreover, and evidently for the purpose of thus far extending the human history, invents a pre-historical dynasty of 10 Thinite kings, with 350 regnal years, in order to interpose them between the gods and Menes. "And this number of 350 years, thus introduced," he concludes further,*—"a number which, though pre-historical and therefore fictitious, yet partakes of no cyclical character, has nothing in common with the Sothic period, and can no more be a Sothic number than its complementary number 3,555, proves by this very circumstance both the genuine and the historical character of this important, truly Manethonian number 3,555; and proves further, that the establishment of the first historical year, or the epoch of Menes, fixed by that number in a direct manner, cannot first date from Manetho, but must be at least as old as is the invention of the cyclical system of Egyptian mythology, inseparably connected with it, and which no one would or could first ascribe to Manetho. The epoch of Menes, therefore, must have been fixed previously to the consolidation of the cyclical system, because the latter is based on that number and supposes it; in other words, the epoch of Menes, recorded by Manetho, was always a given one, historically handed down to him."

Now, I quite agree with the premises established by Professor Lepsius; but the conclusion, which he draws from them, is utterly untenable. Or, is it not simply preposterous to assert, that the number of 3,555 years is "inseparable" from the cyclical system of Egyptian mythology; or that the number in question is *necessarily* involved in that system? It is plain, that any other chronologist than Manetho might have chosen any other number than 3,555 years for the duration of the real history of Egypt, so long as he was possessed of sufficient power of invention to make up the chosen number by a complementary one, in accordance with his system, to the sum of 3,905 years. Supposing the text of Syncellus to read 2,999 instead of 3,555 years, and 906 instead of 350 years, would not the argument of Professor Lepsius apply with equal force to the former, as it does to the latter, or *any other two* numbers of years which, within the 13th Sothic cycle, make up the sum of 3,905 years, reckoned upwards from B.C. 340? Elaborate as is the argument of Professor Lepsius, it is so futile as hardly to deserve the name of argument.

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* "Die Chronologie der Ægypter," vol. i. p. 502.

The third and concluding reason, assigned both by Professor Lepsius* and Bunsen† in favor of the "3,555 years" is, that this number suits no known system of ancient chronology, but is irreconcilable with all, and consequently admits of no explanation in accordance with any such system; "so that Böckh,"‡ Professor Lepsius adds, "after likewise seeking in vain for an explanation, at last arrives at the conclusion, that the sum of 3,555 years is at any rate incorrect, being hardly the invention of any one, but probably resting on an error of Syncellus, who unwittingly vitiated and falsified the traditional number." Certainly, the groundless assertion, to which Böckh has recourse, is undeserving of a moment's consideration; and it must be admitted that, so long as the number in question remains unexplained, the argument, based on this circumstance, is not without some degree of force. But does it follow that, because the number of 3,555 years has thus far defied every attempt at explanation, it should be inexplicable?

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* "Die Chronologie der Ægypter," vol. i. p. 494.

† "Ægypten's Stelle in der Weltgeschichte," vol. i. p. 123.

‡ "Manetho und die Hundssternperiode," p. 142.

We have seen that Manetho—according to Bunsen and Professor Lepsius the *true* Manetho—is, as they themselves attest, a systematizing chronographer, who adapts his entire system to the Sothic period, and invents in the first place a long reign of gods and demi-gods for the purpose of connecting that reign with human history. Bunsen not only recognizes in those royal personifications of Manetho's fancy bodily opposition kings, and divides the Egyptian empire in order to submit to their rule half the lands of the Nile, but he sees, moreover, in the demi-gods of the same historian's creation so many electoral and hereditary princes, and even bestows some ten or twelve centuries of the very reign of the gods on King Bytis and his mortal successors. Professor Lepsius also regards Menes, "according to authentic national records," as the successor of Manetho's pre-historical Thinite dynasty of 10 kings, and the founder of a new empire by the division of a yet older one."* He holds Manetho to have been "a sober, intelligent, truth-seeking historian," who "in all his reports faithfully adhered to his ancient sources"—"the public annals of Egypt"—and whose work, "if it had come down to us entire, would possess, throughout, the value of contemporary monuments."† So that, in fact, but for the loss of the greater part of a work, of which, alas! "the naked skeleton" alone remains, the accredited history of Egypt would, in the opinion of Professor Lepsius, extend back to the epoch of the reign of the gods, i.e. to the year B.C. 21,765.

The palpable object of Manetho, in extending his chronology to so remote a period, is to claim for the nation, to which he belonged, an undue antiquity; and we are, therefore, fully justified in assuming that this tendency, which equally characterises the works of Bunsen and Professor Lepsius in our days, pervades his whole history; and further, since he systematically reckons the duration of a reign of the gods at half a Sothic period, and that of a reign of the demi-gods at the twelfth part of the same period, that he likewise should have computed the duration of a human reign at a fixed number of years, corresponding to his system. *And such, indeed, do we find to be the case.* His "10 Thinite kings," with their regnal period of "350 years," contain the key to his whole proceeding. *He computed the duration of a human reign at* 35 *years.* The historical number of 113 generations, or successive reigns, was handed down to him; their duration probably not. Or, if it was, he made his historical knowledge subservient to his systematizing purpose. At any rate, he adhered to the 113 generations, making them the basis of his calculations, and computing them, as he does the 10 pre-historical generations, at 35 years each. He thus obtained 3,955 years for the sum-total of their reign; and, carrying this period upwards from the year B.C. 340, being the last year of the Egyptian kingdom, he arrived at the year B.C. 4295, that is, 50 years *beyond* the epoch of the Sothic cycle, following immediately upon the reign of the gods. This would not do. Nor did it accord with his system to expand, by another Sothic cycle, either the historical or the pre-historical times, any more than the period of the gods. Was he, then, simply to waive the 50 years, and let the epoch of the reign of Menes fall upon the epoch of the 13th Sothic period, without the introduction of any transition period between that king and the gods,—between history and fable? He had no choice left but to sacrifice a few centuries of the imagined antiquity of his people, for the purpose of preserving, according to his opinion, the historical character of his system. He, consequently, with the view of not curtailing the duration of the 113 reigns, as calculated by him, to a greater extent than necessity required, interposed the modest round number of 10 transition kings, with their 10 × 35 = 350 regnal years, between Menes and the gods. These 350 years, added to the 50 years, by which his sum-total of 113 × 35 = 3,955 years fell in excess of the epoch he had assigned to them, make together 400 years, by which he had to shorten his computation. Subtracting, therefore, 400 years from the sum-total of 3,955 years, we find a remainder of exactly 3,555 years left for the duration of the 113 consecutive reigns, according to Manetho's system.

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* "Die Chronologie der Ægypter," vol. i. p. 25, comp. pp. 500, 501.

† "Die Chronologie der Ægypter," vol. i. pp. 407, 408.

Such is the simple origin of that purely fictitious number of "3,555 years," on which Bunsen and Professor Lepsius have not hesitated to found their systems of Egyptian chronology,—systems which thus, by the proof of their unhistorical and absolutely imaginary basis, are completely and irrecoverably overthrown.

If, however, a still further proof to this effect were needed, it is furnished to us by the "113 generations," which the Manetho of Syncellus—be he the real or a pseudo-Manetho—states to have reigned from the first year of Menes to the death of Nectanebus II., or the extinction of the kingdom of Egypt in B.C. 340. For, it having been shown that Manetho rests his computed system of chronology on that number, it admits of no reasonable doubt, not only that our number was by him regarded as indubitably historical, but that such also is its real character.* The attempt of Professor Lepsius to call this character into doubt, as we have seen, has proved a signal failure.

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* Already Rosellini was of this opinion, without, however, adducing any proofs in its support (*Lepsius*, "Die Chronologie der Ægypter," p. 493; *Rosellini*, "Monum. Stor." vol. i. pp. 13 sqq.; vol. ii. p. 37).

On the other hand, we meet with the same number of 113 successive reigns, occupying the entire space of Egyptian history, in that ancient record called the Old Chronicle, which Bunsen endeavours to represent as a bungling fabrication,* and is commonly, but without sufficient reason, looked upon as an undoubtedly spurious work. Professor Lepsius† would have us believe, not only that it concluded with Amasis, the last king of the 26th dynasty, but also that it enumerated, inclusive of 14 generations of the gods and 8 of the demi-gods, no more than 100 generations,—a purely cyclical number, altogether destructive of the historical character of the document,—and that the 13 supplementary generations, from Amasis to Nectanebus II., were added by Syncellus. But this is not only in positive contradiction with the text of Syncellus; the number of generations or successive reigns between Amasis and Nectanebus II., moreover, is not 13, as Professor Lepsius is under the necessity of pretending,‡ but 17, as reckoned by Syncellus himself.

There can, in my opinion, be no reasonable doubt but that the Old Chronicle—even in the corrupt state in which its chronological skeleton has come down to us, a valuable record—enumerated, like Manetho, under 30 dynasties, 103 or 104 successive reigns of mortal kings to the end of the 28th dynasty = B.C. 399, attributing to them a regnal period of 36,525 − (30,000 + 3,984 + 217 =) 34,201 = 2,324 years, and consequently placing the epoch of the reign of Menes in the year B.C. 2723, in perfect accordance with Syncellus, who makes it to fall in the year of the world 2776 = B.C. 2724. Adding, with him, to the above epoch 10 or 9 reigns, with 59 regnal years, to the extinction of the Egyptian kingdom, we obtain the number of 113 generations, with 2,383 regnal years, between Menes and the last year of Nectanebus II. = B.C. 340. The reign of 8 demi-gods, which the Old Chronicle interposes between the gods and human history, has evidently a twofold aim, namely, that of a transition period, and of making up the cyclical sum-total of 36,525 years which, thus considered, in no manner affects the historical credibility of the number of years, ascribed to the reign of mortal kings. This remark expresses a chronological truth of some importance, and has not been understood by those, who have pronounced so sweeping a judgment against the Old Chronicle.

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* "Ægypten's Stelle in der Weltgeschichte," vol. i. pp. 260-263.

† "Die Chronologie der Ægypter," vol. i. pp. 446, 599.

‡ "Die Chronologie der Ægypter," vol. i. pp. 449, 483.

The Sothis, a work erroneously ascribed to Manetho, and which Professor Lepsius, by his own peculiar critical process, moulds into a similar shape as he does the Old Chronicle, enumerates, according to Syncellus,* between Menes and the conquest of Egypt by Cambyses, 86 successive reigns, with 2,211 regnal years; but the number of reigns being, for the old empire, taken short by 10, Syncellus should, no doubt, have written 96. Adding to this number the 17 reigns from Cambyses to Nectanebus II., we once more find the number of generations, comprised within the historical period of the kingdom of Egypt, to be 113; and, the Persian conquest having taken place in the year B.C. 527, as I have elsewhere shown, the epoch of the reign of Menes would, according to the Sothis, fall in the year B.C. 2738.

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* Page 210, D; Dindorf, vol. i. p. 397.

But the 113 generations of Manetho we meet with yet again and again. Thus Diodorus Siculus* appears to enumerate 116 consecutive reigns from Menes to Darius Codomannus, the third Persian king after Nectanebus II.; and thus he, too, reckons 113 generations between the latter king and Menes. Another combination leads to the same result. Diodorus tells us, that from Menes to Mœris there reigned 81 kings; and from Herodotus† we learn, that if we include the reigns from Amasis to Nectanebus II., apparently the number of kings from Mœris to the latter was 32. Adding both sums together, we obtain once more the sum-total of 113 generations between Nectanebus II. and Menes.

The most important combination, however, is probably the following. Eratosthenes enumerates 38 native reigns during the old, Apollodorus 53 during the new, empire; Manetho 43 Hyksos reigns, of which 2 in the 13th, and 19 reigns in the 18th and 19th, dynasties are contemporary with native rulers, leaving 22 reigns in consecutive chronological order between the lists of Eratosthenes and Apollodorus.‡ On addition of these three series of 38, 22, and 53 kings, as independently enumerated, each for one of the three great periods of Egyptian history, by three different chronographers, we once again arrive at 113 generations, occupying the entire space of the history of Egypt from Menes to Nectanebus II.

This number is still confirmed by additional historical testimony, to discuss which would lead me too far on the present occasion. All I have wished here to show is, that in the passage of Syncellus, previously quoted, and in which he states Manetho to have reckoned 113 generations, with 3,555 regnal years, from the historical commencement to the final extinction of the kingdom of Egypt, not only the "3,555 years," upon which Bunsen and Professor Lepsius have exclusively based their respective systems of chronology, are an indubitably fictitious number, *computed* by Manetho; but, on the other hand also, that the "113 generations," which occur in the same passage, constitute its historical element; and that, if there is among a vast proportion of corrupt figures relative to Egyptian history, which have been handed down to us by ancient chronographers, one number supported by a large mass of evidence and entitled, more than any other, to historical credibility, it is that number of "113 generations."

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* I. 45 sqq; comp. *Lepsius*, "Die Chronologie der Ægypter," vol. i. p. 297.

† II. 101 sqq.

‡ Apud Syncellus; comp. *Bunsen*, "Ægypten's Stelle in der Weltgeschichte," vol. i. pp. 157, 112.

I may now enter upon the consideration of the main point of the present inquiry. It is a well-established truth that, however greatly the duration of single reigns may vary, there is a mean towards which they approximate in the proportion of their number; and that, the longer any series of successive reigns is, the less it will deviate from that mean. Now, we find this mean to be about 21 years for a single reign; and with reference to a series of 113 consecutive reigns, it certainly cannot reasonably be supposed to vary by more than a year on either side. For the probable duration of the 113 generations we would thus obtain the sum-total of 113 × 21 = 2,373 years, and for the two extremes of their possible duration 2,260 and 2,486 years. Reckoning these different periods upwards from the year B.C. 340, we arrive at the year B.C. 2713 as the probable, and at the years B.C. 2600 and B.C. 2826 as the possible, epochs of the reign of Menes, as deduced from the 113 consecutive reigns intervening between him and Nectanebus II.

This is assuming, as I have done throughout, that Syncellus has correctly referred the conclusion of those reigns to the final extinction of the Egyptian kingdom in B.C. 340. From the passage p. 52, A, it appears, however, somewhat questionable, whether he has not, either purposely or unknowingly, and to his own perplexion,—which is the most probable inference,—committed an error in taking the 113 generations with their regnal years, differing in his different sources, to extend to the close of the reign of Nectanebus II., instead of the end of the 28th dynasty only.* If so, he may be supposed, in the manner of Bunsen-Lepsius, to have "emendated" one or more of the numerical elements transmitted to him, in accordance with his critical "convictions."† On this hypothesis, with which the data of Herodotus and Diodorus might possibly be made to agree, our historical basis would be the year B.C. 399 instead of B.C. 340, and the epochs in question have to be raised (in near accordance with Syncellus, who makes the latter interval 39 + 18 = 57 years) by 59 years. We would thus, on the ground of the "113 generations," obtain for the probable epoch of the reign of Menes the year B.C. 2772, for its possible epochs the years B.C. 2659 and B.C. 2885.

It is not my intention on the present occasion to adduce testimony of any kind, which would involve the discussion of details, whether connected with the succession of the Manethonian dynasties, subject to so much difference of opinion, or with the monumental and literary remains of Egypt, still so imperfectly understood. I must necessarily, therefore, confine myself to those few additional points of broad and massive evidence, bearing upon our question, which we possess, and upon which alone, in my opinion, its solution, in the present state of our hieroglyphical and historical knowledge of Egypt, can be successfully attempted.

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* Professor Lepsius supposes the lists of the Old Chronicle and the Sothis, as well as the 53 kings of Apollodorus, whose names Syncellus unfortunately considered it "unnecessary" to give, to extend only to the epoch of the Persian conquest of Egypt; but this is an altogether untenable conjecture, in *positive* contradiction with Syncellus and irreconcilable with the whole course of history.

† See the quotation from Professor Lepsius in p. 48.

There occurs in Herodotus an important passage of this kind, which has been frequently cited, much discussed, and yet never been properly understood. I allude to the well-known passage ch. ii. 142, in which he informs us of the age, which the priests themselves, in personal communication with him, ascribed to their first historical king. "During that time"—from Menes to their own days—they told the Greek traveller, "the Sun had four times left his seat; twice he had risen where he then set, and where he then rose, there he had twice set." Thus Professor Lepsius renders the passage,* which reads as follows: *Ἐν τοίνυν τούτῳ τῷ χρόνῳ τετράκις ἔλεγον ἐξ ἠθέων τὸν ἥλιον ἀνατεῖλαι·† ἔνθα τε νῦν καταδύεται, ἐνθεῦτεν δὶς ἐπαναθεῖλαι· καὶ ἔνθεν νῦν ἀνατέλλει, ἐνθαῦτα δὶς καταδῦναι.* The proper translation of the first phrase of this passage is: "During that time, the Sun had four times *risen out of his normal positions*," namely, in the Egyptian kalendar; for, in no other sense will the remark, professedly of a definite *chronological* import, bear such a construction.

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* "Die Chronologie der Ægypter," vol. i. p. 190.

† The distinguished Berlin Emendator is here, too, at his "critical" work again, and observes with some severity, that I have "forgotten to notice that Böckh (Manetho, pp. 36, &c.) has *plainly proved* that in the passage *ἀναστῆναι* must be read for *ἀνατεῖλαι* ("Transact. of the Chron. Inst." vol. i. supplemental leaf between pp. 164, 165). But in reference to Professor Böckh's work, the reader will find his "plain proofs" to be no more than a *naked surmise*, supported not even by the shadow of evidence. Professor Lepsius would have done well to refer to Professor Bähr's remarks on the subject ("Herod. Musæ," vol. i. pp. 753, 754), who rejects Böckh's proposed "emendation," as he well might; for there is no room for so much as a doubt as to its impropriety.

Professor Lepsius erroneously applies the preceding passage,—which is generally understood to apply, and correctly so, to the Sothic period, or rather to the Egyptian kalendar as based upon the vague year of 365 days,—to "the Phenix cycle," to which he, erroneously again, ascribes a duration of 1,505 instead of 1,507 tropical years,* and with which that passage has no connexion whatever. The Egyptian priests simply transferred the movement of their vague kalendar, as compared with the Earth's annual motion, to the Sun; as we still, in common parlance, do the diurnal motion of our planet. In other words, they applied the length of their vague year, consisting of 365 days, as the year's normal duration to the Sun's apparent motion; and regarding their kalendar as immovable, on seeing the Sun at the commencement, or on the 1 Thot, of each year gradually recede from star to star, they mistook this apparent recession, resulting from their vague kalendar, for a real motion of the Sun; and as really their 1 Thot, in the course of every 1,460 Julian or 1,461 Egyptian years, performed a whole circuit with regard to the tropical year,* so they believed the Sun to

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* Professor Lepsius, on the contrary, maintains the error to be on my own side. "For, Herr von Gumpach," he observes ("Transact. of the Chron. Inst." pp. 164, 165), "has taken the length of the tropical year at our common medium count of 365° 48′ 48″ [*sic*, instead of 365 days, 5h. 48m. 48s.] from which, undoubtedly, a conformity would follow of 1,507 Julian years: but the early tropical year was, as is well known, somewhat longer; and Biot, whom I cite p. 187, in the passage to whom I have already referred Herr von Gumpach [Professor Lepsius' memory is deceiving him in this] gives ("Sur l'année vague," pp. 53, 54) the exact calculation, which brings us to 1,505 Julian years."

Now, in page 187 of his "Chronologie der Ægypter," Professor Lepsius writes thus: "The *tropical or Phenix* year required, from one solstitial Thot to another, 1,505, or with a very trifling deviation from our present reckoning, *exactly* 1,500 years;" to which the following note is appended: "Ideler ('Handbuch,' vol. i. p. 127) writes 1,508; Biot ('Recherches sur l'année vague,' pp. 53, 54) computes 1,505 years." Here Professor Lepsius, who overlooks that Ideler speaks of 1,508 vague (=1,507 tropical) years, makes as yet very light of the result of Biot's "exact" calculation, which, indeed, he only adopts as differing less than Ideler's from the *inexact* number of 1,500 years, he requires, and into which he, by means of "a very trifling deviation," does not hesitate to convert the former.

The precise value of the tropical year and its assumed variation has, since Laplace, whose elements were used by Biot, been found different by Bessel; since Bessel, different by Hansen; and since Hansen, different again by Le Verrier. In another place I shall be prepared to show, that the whole theory of modern astronomy is at fault in reference to the "well-known" variation of the year; and that really 1,508 vague Egyptian years correspond more exactly with 1,507 tropical years, than do 1,505 tropical years with 1,506 vague Egyptian years.

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* Professor Lepsius observes of me ("Transact. of the Chron. Inst." pp. 164, 165): "He will further explain the passage of Herodotus on the solstitial rising, and considers it an error that I understand it of the Phœnix cycle, which he, like myself, admits of *circa* 1,500 *years*."—I have nowhere expressed as yet an opinion—but will do so presently—regarding "the Phenix cycle;" much less have I admitted it to comprise a period of "circa 1,500 years." The idea of an indefinite cycle is simply absurd.

"But," Professor Lepsius continues, speaking of me, "he is, on the one hand, completely in error when he takes the compensating period between the vague and the tropical year at 1,460 Julian years: for the first Thot shifts itself, as regards the Sun or the tropical year, in about 1,500, which is the great Phœnix period, but in 1,460 years only [sic], as regards the stars, in the first instance against Sirius, and this is the Sothic period."

It is somewhat amusing to have the *difference* between the tropical, or solar, and the sidereal year explained to me *ex cathedra* by Professor Lepsius; who, at p. 152 of his "Chronologie der Ægypter," states, that the fixed year of the Egyptian priests was a *sidereal* year of 365¼ days, determined by the heliacal rising of Sirius; and at p. 155, that the same fixed year of the Egyptian priests was a *solar* (or tropical) year of 365¼ days, likewise determined by the heliacal rising of Sirius; both being, consequently, by him represented as strictly *identical.*

I need hardly say that, in explaining the views of the Egyptian priests, as stated by them to Herodotus more than 2,300 years ago, I do not suppose them to have studied Laplace's *Mécanique Céleste.* At the introduction of their kalendarian system in B.C. 2785, they took the true length of the tropical year to be 365 days. At what precise period they may have fixed its duration at 365¼ days, and thus originated the *Sothic cycle,* is unknown to us. At the first completion of this cycle in B.C. 1325, they certainly cannot have failed to observe, that *the rise of the Nile* had changed its position in their kalendar; and as that event was known to take place *about* the time of the summer-solstice, they may *possibly* also have concluded from that circumstance, combined with astronomical observations, that the length of the tropical year had been fixed too great by about eleven days in 1,461 years. But no Gregory XIII. is recorded to have arisen among them. They continued their "Julian" tropical year of 365¼ days,—as the Russians and Greeks, notwithstanding the Gregorian reform, do to this time;—and, although perform that circuit, in the same (the Sothic) period, with regard to the stars.

Hence, the meaning of the priests is perfectly clear. Yet, strange enough, our passage has frequently been understood to refer to four, or even eight, completed Sothic cycles. Professor Lepsius has been the first to interpret it more correctly. He holds it "to indicate only two completed cycles," and that "uncontradictorily;" but the temptation to contradict himself proves too irresistible for him: he yields to it, and shows, a third time contradicting himself, that the words in question, in fact, refer only to one completed circuit and a half.* And such is

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"the Phenix cycle," therefore, supposing it to mean simply a more correct period of compensation between the kalendarian year of 365 days, and the true tropical year, may have been *conceived by them as a scientific fact*, it is *in the highest degree improbable* that it should have assumed *the practical form of a chronological cycle;* and without *positive proofs* to that effect, the idle speculations of Professor Lepsius on the subject ("Die Chronologie der Ægypter," pp. 180-195) are to be unhesitatingly rejected. He himself quotes a passage from Tacitus ("Annal." vi. 28) which leaves no doubt as to the Phenix period, mentioned by Greek and Roman authors, resting on no other ground save a vague and mistaken idea of the Sothic cycle.

According to the theoretical views of Professor Lepsius, the Egyptian priests, on the same principles upon which he supposes them to have instituted the Phenix cycle, by extending the Sothic period, as applied to the Sun, from 1,460 to 1,500 "fixed" years, ought to have reduced it, as applied to the stars or rather to the heliacal rising of Sirius, from 1,460 to 1,425 "fixed" years,—the difference in the latter case being only five years less than he assumes it to be in the former; and which would seem to have escaped his attention.

To suppose the passage of Herodotus to refer to the imaginary "Phenix cycle" of "circa 1,500 years," is about as rational as it is to conclude from a hieroglyphical passage, which Professor Lepsius himself *admits to be unable to decipher* ("Die Chronologie der Ægypter," p. 127), that the ancient Egyptians subdivided their day into fractions corresponding to 0s.4 or two-fifth parts of one of our seconds of time,—because it is *his belief* that, in the passage in question, *the term "hour" is omitted to be mentioned* between "day" and "minute" (pp. 128, 129), —and to advance such a wildly hypothetical division of time as one of his *proofs* of "the highest and most perfect state of development," to which the astronomy of the Egyptians had attained (p. 234).

* "Die Chronologie der Ægypter," vol. i. pp. 190, 191, 195. Professor Lep-

indubitably the case. Let the Sun on any given day have been in any given sign of the zodiac, that day is the starting-point,

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sius denies these contradictory statements, and observes ("Transact. of the Chron. Inst." pp. 164, 165): "Herr von Gumpach affirms that I contradict myself, by rendering the passage of Herodotus in one place as two, and in another as one and a half, apparent revolutions of the Sun. But the last explanation, which is and will remain purely his own, is to be found nowhere in my essay: he has forgotten to notice that Böckh has plainly proved, that in the passage ἀναστῆναι must be read for ἀνατεῖλει."

As to this emendation, compare the note (†) to p. 62. But, according to Professor Lepsius' own translation (p. 190 of his "Chronology"), the Sun "left his seat" for the first time in the days of Menes, as one of the given termini of the period in question; for the second time, 730 years after Menes; for the third time, 1,460 years after Menes; and for the fourth time, 2,190 years—being *one and a half* completed cycles—after Menes, as the nearest "change" to the second of the given termini, comprising the period in question, namely, the presence of Herodotus in Egypt. Page 191, on the contrary, Professor Lepsius states: "Now, if the Sun twice rose where he sets, and twice set where he rises, this means, uncontradictorily, that the Sun had completed *two* full circuits." Page 195, he writes again: "It is therein—in the passage of Herodotus—said, that since Menes the Sun had *twice* completed his great circuit, and *consequently had stood four times at the opposite points of his orbit.*" Every school-boy, however, should know that the latter supposition implies one and a half completed cycles only; and so Professor Lepsius *himself calculates it in the same p.* 195, placing, as he does, the first change since Menes in the year B.C. 3285, on the *summer*-solstice; the second in the year B.C. 2533, on the winter-solstice; the third in the year B.C. 1780, on the summer-solstice; and the fourth in the year B.C. 1028, on the *winter*-solstice. Now, a period comprised within the *summer*-solstice and the next following *winter*-solstice, necessarily consists of 1½ completed cycles only; and the interval between the years B.C. 3285 and B.C. 1028 being, as we find by a simple process of subtraction, 2,257 years: this number of years, also, makes up no more than 1½ cycles of 1,505 years each, according to Professor Lepsius' own numerical statements.

Yet, in the self-same p. 195, he once more takes the 1½ cycles to represent 2 completed circuits of the Sun, and to comprise, according to one place, 3,000 years; according to another, about 2,672 years; and according to a third, 2,257 years; while the period from Menes to the time of Herodotus' presence in Egypt commenced, according to one place, "about the year B.C. 3700;" according to another, in "B.C. 3285 (—3282);" and according to a third, in B.C. 3893. And in the face of all these glaring and numerous contradictions, Professor Lepsius protests that there is not a contradictory passage in his whole book; and in defiance of his own numerical statements, showing that the passage in Herodotus is to be understood of 1½ completed cycles, he positively maintains that no such explanation is to be found in his essay.

and on it he would for the first time leave his normal positions, rising in the one sign and setting in the opposite sign; 730 years later he would rise in the latter sign and set in the former, leaving his normal positions for the second time; 730 years later still, he would rise and set a second time in his first places, leaving his normal positions a third time; and 730 years later again, he would set a second time where he first rose, and rise a second time where he first set, leaving his normal positions the fourth time. And such were the (apparent) changes, which the priests of Egypt told Herodotus, the place of the Sun had then undergone (in their vague kalendar) since the reign of Menes. Consequently, they placed Menes at a distance from their own time of not less than 3 × 730 = 2,190 years, or 1½ Sothic periods. But it is little probable that Herodotus should have arrived in Egypt *precisely* 1½ Sothic periods subsequent to Menes. On the other hand, it is as little probable that the priests, had the Sun already entered the fourth quarter of his second circuit, should not have expressed themselves differently from what they did, and to the effect that he was about to leave his normal positions for the fifth time. In all probability, therefore, the Sun was then in the third quarter of his second circuit since Menes; and the epoch of the latter's reign must thus, according to the Egyptian priests themselves, have fallen in the interval of the years 2190-2555 before the visit of Herodotus to Egypt in about B.C. 460, and hence in the interval of the years B.C. 2650-3015, in perfect accordance with the epochs previously found.

Professor Lepsius, who knows how to press every date into his service and to shape it into harmony with his own particular views, has arrived at a very different result.* In the first place, and for the purpose partly of gaining a suitable starting-point, partly of securing an additional century of Egyptian antiquity, he substitutes "the Phenix cycle" of 1,505 years for the Sothic period of 1,460 years. In the second place, he converts the 1½ cycles, in contradiction with himself, into 2 completed cycles, thus gaining seven centuries and a half more. And in the third place, he refers the end of that period, not to the time of Herodotus' presence in Egypt, as the repeated νῦν attests that it should be done; but to the time of Sethos, the priest of Hephaistos, in order to gain another two centuries and a half in support of his system. In other words, besides reckoning 2 instead of 1½ cycles, he raises their *terminus a quo* from about (2 × 1,505 + 460 =) B.C. 3470, according to his mode of reckoning, to "about B.C. 3700;" yet withal two centuries *posterior* to Menes, the epoch of whose reign he places in B.C. 3893; insinuating that the first departure of the Sun was stated by the Egyptian priests to have taken place "*since*" Menes, as though, under such a supposition, Menes might not with the same propriety be assumed to have lived as many thousands, as he assumes him to have lived hundreds, of years previously to that epoch, which is intended to denote the time of his reign, and therefore *must necessarily coincide with the latter;* for else the whole passage would be deprived of its chronological character.

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* "Die Chronologie der Ægypter," vol. i. p. 195.

An important question thus presents itself to us, namely, whether the Egyptian priests referred to two normal positions of the Sun, considered with regard to the Earth as well as to the Egyptian kalendar, or whether they spoke of any two points whatever in the Sun's (apparent) orbit, at which he may have happened to rise or set on the 1 Thot, during the reign of Menes. For, that the 1 Thot marked the commencement of the Egyptian year then, as it did in subsequent times, I have previously shown. The Herodotean passage, certainly, is couched in such general terms as to admit of a general construction; yet, when we consider that the Sothic period forms the basis of the priestly statement, and that the 1 Thot, coinciding with the epoch of that cycle, fell, in the normal year, together with the summer-solstice and the inundation of the Nile, we can hardly fail to arrive at the conclusion that, in speaking of the Sun's normal positions, they meant the two solstices and their coincidence, in the first place that of the summer-solstice, with the 1 Thot; *and that, consequently, they represented the reign of Menes as comprising the corresponding epoch of the Sothic cycle, i.e. the year B.C.* 2785. And this epoch, in perfect harmony with our historical results, is seen to fall within the limits of the possible epochs, deduced from the "113 generations," and to differ by only 13 years from their most probable epoch.

Before I proceed further, I will say a few words on the short systems of chronology, to which I have previously referred. Mr. Nolan chiefly relies on the Old Chronicle; Mr. Osburn principally on the monuments, in connection with the date of the Jewish exodus. Both arrive at their respective epochs of the reign of Menes by a process of chronological details, a discussion of which is necessarily excluded from the scope of this paper. The case is different with regard to the system of Mr. Poole.* He fixes the epoch in question independently of those details, and on a cyclical and astronomical basis. In the first place, Mr. Poole assumes the existence of what he terms a Tropical cycle, comprising 1,500 vague years. Its epoch, which he refers to the year B.C. 2005, he states to be marked by the vernal equinox, attended by the occurrence of a new-moon, and the coincidence of the tropical and the vague years. He further shows, that the Egyptians had great panegyrical periods, to which he assigns a mean length of 365¼ Julian years, or an alternate duration of 364½ and 366 years; each panegyrical month consisting of 30 years, and being divided into twenty divisions of 1½ years each, with 4½ or 6 intercalary years at the end of each period. He then, finding that in the reign of Amenemhe II. the commencement of the tropical cycle, as he interprets a certain monumental inscription, is mentioned as having occurred in the course of the twelfth division of the twelfth month of a panegyrical period: he refers this date to the year B.C. 2005, and thus is enabled to compute the epoch of the corresponding panegyrical period to have been the year B.C. 2352, and the preceding epoch the year B.C. 2717, in which he places the commencement of the reign of Menes. But this view, much as it contains that is true and important, contains undoubtedly much also that is erroneous and untenable. In the first place, a tropical cycle of 1,500 vague years, having no astronomical basis, is an extremely precarious period to assume without conclusive proofs. In the absence of such proofs, it is altogether inadmissible. Mr. Poole quite correctly states, that in the year B.C. 2005 the vernal equinox fell on the 7 April; but, as he himself shows, even the astronomical new-moon did not coincide with it, whilst the first visible phase, which we have alone to consider in similar cases, occurred three days later, as the 1 Thot, falling on the 7 January, did three months earlier. A further objection consists in the assumed anomalous division of the month of 30 years in twenty parts of 1½ years each, as being contrary to all chronological rule. Nor could the great panegyrical period, connected with the Sothic period, have comprised, as he assumes, $\frac{1461}{4} = 365\frac{1}{4}$ Julian, but only $\frac{1460}{4} = 365$ Julian, or $\frac{1461}{4} = 365\frac{1}{4}$ vague years; whence it follows, that the commencement of each period fell at first successively on, or nearly on, the four cardinal points, differing subsequently more and more from them. The panegyrical period must necessarily have consisted of regular cycles of 365 Julian years, divided into regular "months" of 30 years each, with regular intercalary "days" of 5 years. Its first epoch would seem to have been that of the Sothic cycle B.C. 2785,—a supposition, with which at least *all the panegyrical dates, which Mr. Poole has read upon the monuments, agree.* Mr. Poole's hypothesis of "the Tropical cycle," therefore, being inadmissible, his epoch for the reign of Menes must likewise be rejected, as resting on no solid foundation.

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* "Horæ Ægyptiacæ," pp. 20 sqq.

On the other hand, the importance of the discovery of Dr. Brugsch, which I have previously and fully established on historical and astronomical grounds, can, with reference to Egyptian chronology, hardly be overrated. It completes the proof of the utterly untenable nature of the chronological systems of Bunsen and Professor Lepsius, and causes the whole structure of chronological speculations, based on Champollion's interpretation of the seasons, to fall to the ground. According to that interpretation it had to be assumed that, at the period of the introduction of the Egyptian kalendar, the year commenced with the 1 Pachon instead of the 1 Thot, as it was known to do subsequently. Hence, the epoch of the year —3285 was derived, in which—or rather in the year B.C. 3282, erroneously substituted for it by Professor Lepsius—this savant places the introduction of the Egyptian solar kalendar, although he finds himself under the necessity of undertaking, without so much as a trace of historical authority, its complete reform 500 years later, namely, in —2785 (B.C. 2782),—a reform, which no chronologer could ever have accepted, and has now been *proved* to be simply the work of Professor Lepsius' own imagination; so that the epochs of the years —3285 and —1780, as bearing upon Egyptian chronology, will have to be consigned to oblivion. We thus find the historical times of Egypt depressed to the year B.C. 2785; and the only question remaining to be solved is, whether the reign of Menes be marked by that very epoch, or whether it fall posterior to it.

The discovery of Dr. Brugsch enables us to arrive at a definite conclusion upon this point, in as much as it fixes the introduction of the Egyptian kalendar to one of the epochs of the Sothic cycle. The years B.C. 2785 and B.C. 1325 are such epochs. In both years, the 1 Thot, or the commencement of the year and of the season of inundation, fell on the 20 July in the Julian kalendar; in both years the Sothis or Dog-Star, the heliacal rising of which on the 1 Thot marked the epoch of the Sothic period, did so rise on the 20 July. The real rise of the Nile at Memphis commenced then, as it does now, about the time of the summer-solstice. In B.C. 1325, the summer-solstice occurred on the 5 July; in B.C. 2785, on the 17 July. In B.C. 1325, the first phase of the new-moon fell in the night of the $\frac{19}{20}$ July; in B.C. 2785, the full-moon, or rather that phase of it answering to the first phase of the new-moon, occurred at midnight on the $\frac{19}{20}$ July. A cursory glance at these dates shows that, as regards the period of the first introduction of the vague Egyptian kalendar, the far greater probability is in favor of the year B.C. 2785, in as much as the 1 Thot and the commencement of the season of the Nile then strictly corresponded in time with the actual rise of that river at Memphis, which was not the case in B.C. 1325, when the imperfect agreement of the Sothic period with the tropical year had already led to a difference of 11 days between the kalendarian and the physical epochs of the inundation. This circumstance alone might be regarded as decisive, but there are further proofs which give to it an irresistible force. They are, independently of other historical testimony, that the five intercalary days have, by Professor Lepsius, been traced on the monuments up to the twelfth dynasty, consequently to a time much anterior to the year B.C. 1325; and that Mr. Poole has adduced monumental proofs of the occurrence of panegyrical dates up to the fourth dynasty, the panegyrical period being but a subdivision of the Sothic cycle.

But if the Sothic cycle was in use in Egypt previously to the year B.C. 1325, the kalendarian system, too, inseparably connected with it, must have been introduced at an earlier period. Indeed, the very circumstance of the panegyrical period being but a precise reproduction of the vague year on an enlarged scale, proves the anterior or contemporary origin and use of the latter. The introduction, therefore, of the kalendar of which the vague year is the type, before the year B.C. 1325, must be looked upon as an indubitable fact. Consequently, it must have been introduced at the preceding epoch of the Sothic cycle in B.C. 2785, because at no intermediate time would the kalendar have corresponded with the actual phenomena of nature, to which it was originally adjusted. And admitting this, the question concerning the epoch of the reign of Menes assumes very narrow limits; for, the introduction of a national kalendar, regulating the civil time and the religious festivals and public observances of a people, is not a theoretical proceeding and invention, the origin of which, like that of the Julian period, may at pleasure be thrown back into the past: it is one of the most important legislative measures, as a kalendarian system itself is one of the most important national institutions, which of necessity demands and supposes a contemporary founder.

Hence, our inquiry resolves itself into the simple question, whether Menes lived about the beginning of the twenty-eighth century, or whether the accredited history of Egypt ascends to far remoter times? History, as we have previously seen, returns but one answer to this question; showing that the epoch of Menes, being the first historical king of Egypt, was most probably included between the years B.C. 2772 and B.C. 2797, certainly between the years B.C. 2650 and B.C. 3015. We may, therefore, now state it to be a historical fact admitting of no reasonable doubt, that the reign of Menes comprised the year B.C. 2785, and that the kalendarian system, represented by the vague year and the Sothic cycle, was introduced in Egypt by *him:* because this system can have originated only in that particular year; because it can have been established by no one but a contemporary lawgiver; because history attests both that Menes was the *first* historical lawgiver of the Egyptians, that he lived at or about the time in question, and that the historical antiquity of Egypt does not reach many years beyond the epoch B.C. 2785; and because the first historical king of a people cannot possibly be assumed to have lived *posterior* to the institution of such a kalendarian system, as is represented by the vague year in connection with the Sothic period.

It is, of course, to be presumed that Menes, when he promulgated his kalendar, basing it on the astronomical knowledge of his time, combined with those natural phenomena which Egypt, in his days, offered as most suitable to his purpose, had already held the government for a certain number of years; and that, consequently, the year B.C. 2785 does not, strictly speaking, mark the commencement of his government,—the true date of which may *possibly* be the year B.C. 2797, as derived from the Sothis;—but the difference of these few years is comparatively of little moment as compared with the main fact, that the reign of the first historical king of Egypt comprehended the epoch of the Sothic period, corresponding to the 20 July, B.C. 2785.

From one of the astronomical features attending that epoch, it would almost appear that at first the Sothical and panegyrical festivals were observed at the full-moon; and that only in the year B.C. 1325, when the shorter panegyrical periods had been found not to keep in accordance with the lunar phases, the Apis cycle of 25 years was introduced for this purpose, and the first phase of the new-moon, occurring on the day of the first renewal of the Sothic period, was substituted for the full-moon. Thus, at all events, the introduction of the Apis cycle in the year B.C. 1325, which I have proved to be one of its epochs,—to supply the place of the panegyrical period of 30 years, also termed the Set period,—would be most satisfactorily explained, although at present this is no more than a conjecture, and it may possibly be found that the two cycles were in use simultaneously; and that, as the period of 25 years, connected with the occurrence of the new-moon and the worship of the Apis at Memphis, so the period of 30 years may, independently of it, have been connected with the occurrence of the full-moon and the older worship of the Mnevis at Heliopolis.

Questions like these, however, are necessarily excluded from the scope of the present paper, the only object of which has been to establish the historical antiquity of the people of Egypt, and to lay a first solid foundation for Egyptian chronology.

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RECENT WORKS BY THE SAME AUTHOR.

The True Figure and Dimensions of the Earth, newly determined from the results of geodetic measurements and pendulum observations; compared with the corresponding theoretical elements, for the first time deduced upon purely geometrical principles, and considered both with reference to the progress of scientific truth, and as bearing upon the practical interests of British commerce and navigation; in a Letter, addressed to George Biddell Airy, Esq., M.A., Astronomer Royal. With thirty illustrative diagrams. Second Edition. London, 1862, 8vo.

OPINIONS OF THE PRESS.

The profound respect which is due to so great an astronomer as Newton has degenerated, we fear, into a species of idol-worship; and relics of his are venerated, which, it may be, he himself would now be one of the first to toss aside as worthless. . . . It is not for us to enter into this great question, or to offer any opinion on it; but although our prepossessions are all on the orthodox side in this instance, still, we hail with satisfaction the endeavour of any able man of science, such as this author clearly is, to shake from its lofty pedestal the idol, before which nearly all the orthodox so slavishly and superstitiously bow; *and we trust that he will not be deterred from urging his views to their final issue*, by all the ultra-scientific horror and the *odium astronomicum* with which the slightest disrespect to the idol is regarded. . . . Such a subject *ought to be candidly and boldly discussed* with the new heretic by the orthodox, who should show him the error of his ways *if they can do so;* and not slink into their stiff and safe shell-retreats of orthodoxy, as the Astronomer Royal does in his somewhat laconic and highly dignified correspondence with Mr. von Gumpach. There *may* be more things in heaven and earth than are dreamt of even in orthodox astronomy. Indeed, it is not long since the Astronomer Royal himself admitted his perplexity on a cosmical subject but too likely to be casually connected with the very point in question of the actual form and dimensions of the earth. . . . Uncertainties such as these among astronomers, as well as their general ignorance on the subject of cometary astronomy, ought to make them a little more humble, and a little less supercilious in their intercourse with scientific heretics, than they are inclined to be. This is not a subject, however, into which it is our province to enter: all we desire to do is to aid in bringing the new views of this author before the public for discussion and settlement, as highly practical and important ones.—*The Builder*.

Whatever may be the extent of the writer's abilities, he must expect to lie under the ban of orthodox astronomers, who, as a rule, profess to hold in utter horror those, who evince the slightest approach to disbelief in the theories of Sir Isaac Newton.

We must leave the judgment in this matter in the hands of those, who have devoted themselves to the endless study of the mighty science; but at the same time we would claim for the writer of the volume under consideration the attention, due to his elaborate exposition of his honestly conceived opinions. He asserts and *demonstrates* that the earth is a *prolate*, and not an *oblate*, spheroid. In other words, that instead of being flattened it is elongated at the poles; and that there is *an error of excess of nearly* 167 *miles in the calculation of the earth's circumference at the equator*. . . . Were Newton to live over again, and to be in possession of the truths brought to light by scientific research in the interim, it may reasonably be supposed that he would be the first to innovate upon his preconceived theories, if he found in them the smallest error. He would be no blind and deaf follower of error, because that error was his own, and would be foremost in the ranks of those who seek to render more complete and perfect the system which he instituted. He who confessed himself to be as a child on the margin of the ocean of truth, would have been far less satisfied than are his disciples; and *instead of throwing cold water upon the efforts of those whose sole object is the fuller development of truth, he would be the most ready to meet his opponents face to face.* The cause of truth can never suffer by investigation, and if Mr. von Gumpach is wrong, *nothing is easier than to prove him so.* . . . Good must arise from discussion; and if Newton's "Principia," composed more than a century and a half ago, comes out of the examinatory test untouched, the more will it redound to his already world-wide renown and his justly and highly extolled genius.—*The United Service Gazette.*

It is a daring act to attempt to upset a theory, which has been established as true for several generations. We know what was the punishment of the men who first set the earth and all the planets revolving round the sun; and others have suffered as severely for similar endeavours to set people right and alter all preconceived notions of facts. . . .

Fortunately, for the sake of humanity and the interests of science and commerce, the important question here at issue admits of a solution, at once simple and incontrovertible. It turns altogether upon one single fact—the actual linear extent of the terrestrial equator; and the author's main object is to direct the attention of Her Majesty's Government to the subject, and to suggest the expediency of a scientific expedition to the equator, for the purpose of ascertaining by measurement the linear extent of the earth's equatorial circumference, and thus to set the general problem of the true figure of our globe for ever at rest. . . . M. von Gumpach then proceeds to solve the problem theoretically. . . . Certainly, the subject is of sufficient importance to command the atttention of all scientific men.—*The Observer.*

The extreme importance of the question raised is, we agree with the author, obvious, inasmuch as bearing upon science it involves the destruction of the entire system of modern theoretical and physical astronomy.—*The Mining Journal.*

We have all been told at school, that Sir I. Newton first proved the Earth to be a spheroid generated by the revolution of an ellipse round its minor axis; but brilliant as this theory is, like everything emanating from so great a philosopher, we must not forget that in science we do not seek brilliancy, but truth; and we have therefore carefully perused a volume just published, by Johannes von Gumpach, entitled, "The True Figure and Dimensions of the Earth," in which the author refutes Newton's theory, and endeavours to establish the startling proposition, that the earth, instead of being *depressed*, is *elongated* at the poles, having, in fact, the shape of a lemon. . . .

The Academy of Sciences has received a communication from M. Leverrier, on the determination of the longitude of Havre, in which the author, after commenting on the difficulties attending the operation, remarks that the latitudes of points on the earth's surface, determined by geodetic operations, often differ so considerably from those obtained by astronomical observation, as to induce one to attribute them to the irregularity of the terrestrial spheroid. Hence, M. Leverrier strongly recommends the re-measurement of the differences of longitude between the extremities of the earth's parallels, so necessary to the exact determination of the figure of our globe. We are here forcibly reminded of M. de Gumpach's work, which we mentioned a few days ago; and we think that M. Leverrier's explicit admission of the ambiguity of the latitudes hitherto determined goes far to prove M. de Gumpach's arguments in favor of the prolate, and not oblate, figure of the terrestrial spheroid. *We should not omit observing here, that the question is of immense importance to navigation.* Suppose a captain, for instance, to have, on a certain day, determined the position of his vessel by direct observation, and then to continue his course according to his chart, being prevented by cloudy weather from repeating his observations. His chart points out a sunken rock on his track, say 100 miles from the place of his last observation; but he keeps a correct reckoning, and will take good care to avoid the point of danger; when lo! while he still thinks himself five miles away from it, his vessel strikes—and why? because the circumference of the earth is stated to be 167 miles larger than it is; wherefore, *having commenced his reckoning from a true point, he continues it after an erroneous scale.* We have no doubt *that M. de Gumpach is right in attributing many hundred disasters at sea to this cause.—Galignani's Messenger.*

The volume before us is a learned and ingenious composition, and is worthy of the serious attention of all who take an interest in the subject. There can be no question either that to determine, beyond all doubt, the arc of a degree at the equator would be a great benefit to astronomical and geodetical science, and this is the object the author has in view in the publication of his book.—*The Daily News.*

Herr von Gumpach has given us a scientific treatise which is really lively. —*The Morning Herald.*

The reader will easily see, that when we have granted that the earth is not truly spherical, we have, in fact, *given up its centre altogether.* What is its centre? *How do we know that it has a centre?* [Hence] it is *manifest* that M. von Gumpach's view cannot be maintained for a moment.—*The Parthenon.*

Some time ago, we said a few words on Mr. von Gumpach and his notion that great wealth and thousands of lives are lost by the "abstract idea of universal gravitation," leading to a wrong figure of the earth. [The "notion" is *too* strikingly *Athenæum*ish for any one to mistake its proprietorship.]. . . It very often happens that speculators of a certain class, when we give them our notice, represent us in their subsequent works either as agreeing with them, or as coming much nearer to them than we should wish to be thought. We thank Mr. von Gumpach for sparing us the moment of annoyance which we confess we feel when we see ourselves thus treated. He describes us as "the *Athenæum*, which, so far as science is concerned, would appear to seize upon every opportunity of stultifying itself" [and duly furnishes the proofs]. This is as it should be. When persons are angry [oh, oh,] because journals do not side with them, they take for granted that the editor is in ignorance of what is going on, and that the job of quashing truth is due to some "hack" or "scribe": Mr. Gumpach, in a private note, [which the editor has been called upon, but has declined, to place before his readers,] says, "subordinate." Now, we may repeat, what we have said before, that every line in our columns which is not noted, in one way or another, as coming from a correspondent, is what is technically called editorial—that is, it expresses the corporate opinion of the *Athenæum.* We see it, we read it, we add, we omit, or we modify [in short, we do "the job of quashing truth" *personally*] as we see need. We have no "subordinates."—*The Athenæum.*

It begins to be pretty well understood that to offend Mr. Dixon is to lose all chance of any impartial notice in the "Athenæum." Really this should be seen to. If Mr. Dixon chooses to make himself ridiculous, why, let him; but he surely ought not to be allowed to misinform the public. . . . Did he not attack Macaulay on the question of Penn's character? Yes; and was he not treated as he deserved by the eloquent historian?—*The Critic*, for May 17, 1862.

Robert Hardwicke, 192, Piccadilly.

Recent Works by the same Author.

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Der Prophet Habakkuk. Nach dem gründlich revidirten, zum erstenmale in seiner ursprünglichen Verbindung wiederhergestellten hebräischen Text auf's neue übersetzt, eingeleitet und erklärt.—München, 1860, 8vo.

Die Freudenbotschaft des Gottesreiches. Eine auf chronologischem Grunde angeordnete einheitliche Darstellung der Evangelischen Geschichte.—München, 1860, 12mo.

Abriss der Babylonisch-Assyrischen Geschichte, von dem Beginn des 25ten bis in die letztere Hälfte des 6ten Jahrhunderts v. Chr., &c., mit besonderer Rücksicht auf die Zeitfolge entworfen.—Mannheim, 1854, 8vo.

Zwei Chronologische Abhandlungen: "Ueber den Apiskreis" von Professor R. Lepsius, und "Mémoire où se trouve restitué pour la première fois le Calendrier lunisolaire chaldéo-macédonien," &c., von Th. Henri Martin, kritisch gewürdigt. Nebst einem Anhange über die, den Makkabäerbüchern zu Grunde liegende Epoche der Seleucidischen Ære.—Heidelberg, 1854, 8vo.

Ueber den Nutzen der Largeteauschen Sonnen-und Mondtafeln.—Heidelberg, 1854, 4to.

Huelfsbuch der Rechnenden Chronologie, oder Largeteau's abgekürzte Sonnen-und Mondtafeln zum Handgebranch für Astronomen, Chronologen, Geschistsforscher und Andere herausgegeben, erweitert und erklärt, nebst Beispielen ihrer praktischen Anwendung,—Heidelberg, 1853, 8vo.

Eine Kritik und Antikritik, als Streitschrift wider Herrn Heinrich Ewald, aus den Heidelberger Jahrbüchern besonders abgedruckt, nebst einer Einleitung.—Heidelberg, 1853, 8vo.

Die Zeitrechnung der Babylonier und Assyrer, nebst Exkursen.—Heidelberg, 1852, 8vo.

Alttestamentliche Studien.—Heidelberg, 1852, 8vo.

May be had of Dulau & Co., 37, Soho Square.